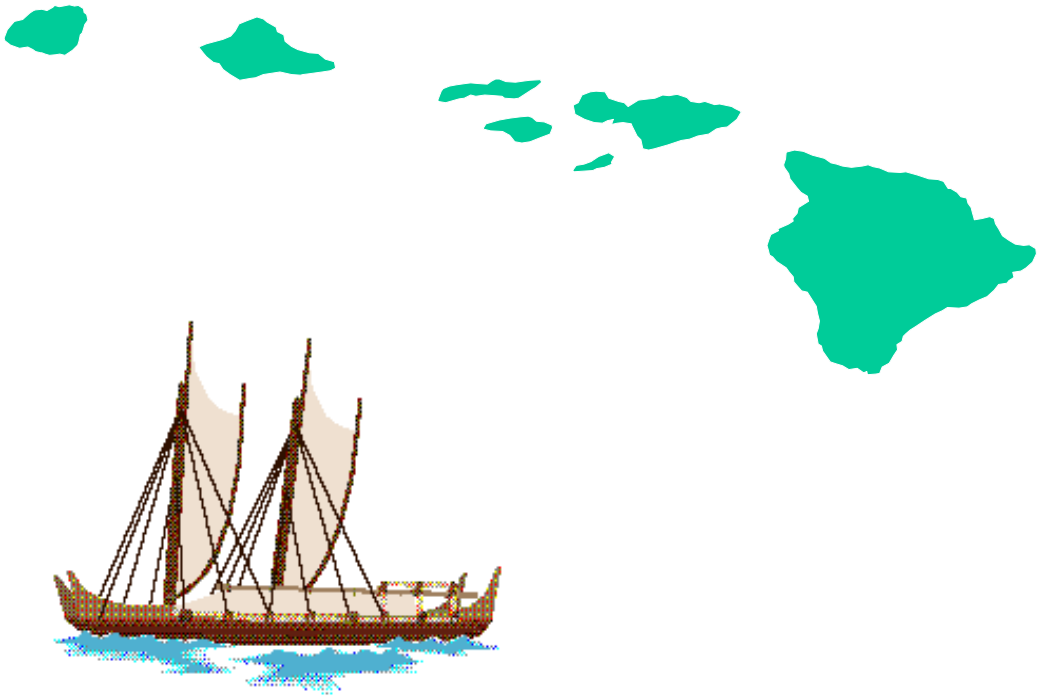
An Epidemiologic Profile of HIV/AIDS in Hawai‘i



June 2001

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Epidemiologic Profile of HIV/AIDS in the State of Hawai'i
Executive Summary

This epidemiologic profile describes the AIDS epidemic in Hawai'i and outlines the impact of HIV/AIDS in Hawai'i. By studying on change over time, it also identifies trends of increasing risk in certain groups.

The central findings are summarized below:

- A cumulative total of 2,454 cases of AIDS has been reported in Hawai'i as of December 31, 2000. Of these, 1,452 are known dead. AIDS cases peaked in 1993 and decreased thereafter except in 1998. The decline in AIDS incidence and deaths shown since 1996 is due to the successful treatment therapies introduced that delay the progression of HIV infection to AIDS and death.

- The number of prevalent cases of AIDS continues to increase despite the fact that new AIDS case diagnoses has decreased. At the end of 2000, there were 1,002 persons living with AIDS.

- For Caucasians and African-Americans, their proportion of AIDS cases exceeds their proportion of the state population, implying higher-than-average incidence rates. For all other racial/ethnic groups, their proportion of AIDS cases is less than their proportion of the state population, implying lower-than-average incidence rates.

- The proportion of AIDS cases among Caucasians has decreased from 72.9% before 1991, to 62.7% in 1991-1995 to 55.9% in 1996-2000, while it has increased among Hispanics, African-Americans and Asian/Pacific Islanders (including Hawaiians, Filipinos, Japanese, and other APIs) during the same time periods.

- Women account for an increasing proportion and number of AIDS cases (3.2% and 20 cases before 1991, to 5.9% and 68 cases in 1991-1995, to 10.8% and 72 cases in 1996-2000), but men still account for a considerably larger proportion and number in the same time periods.

- Most AIDS cases (74.6%) are diagnosed in individuals in their thirties and forties. Over time, there was a decrease in the proportion of AIDS cases for people in their twenties and an increase in the proportion of cases in those forties and over 49. On the average, there has been less than one case per year of pediatric AIDS (diagnosis before age 13).

- Men who have sex with men (MSM) account for the majority of cases (1,866, 76.0%), followed by injection drug use (IDU) (168, 6.8%), MSM/IDU (167, 6.8%) and heterosexual contact (127, 5.2%). The proportion of AIDS cases attributed to MSM, MSM/IDU has decreased over time, while the proportion of AIDS cases attributed to IDU and heterosexual contact has increased. Among females, heterosexual contact is the most common risk category (86 out of 160).

- The majority of the state's AIDS cases (1,796, 73.2%) has been reported in Honolulu County. In the most recent 5 year period, Maui County has had the highest AIDS rate (67.1 per 100,000 population), followed by Hawai'i County (55.7), Honolulu County (54.9) and Kaua'i County (48.0).

Chapter I

Introduction

This document provides a narrative and statistical profile of the HIV/AIDS epidemic in Hawai'i as of December 31, 2000. The purpose of this epidemiologic profile of HIV/AIDS in Hawai'i is to describe the distribution of HIV/AIDS cases in the state and to help HIV Community Planning Groups understand and interpret HIV/AIDS-related epidemiologic data. This profile addresses four questions that are key to effective community planning:

1 . What are the socio-demographic characteristics of the population?
2. What is the impact of HIV/AIDS on the population?
3. Who is at risk for becoming infected with HIV?
4. What is the geographic distribution of HIV infection and AIDS?

The epidemiologic profile is arranged around these key questions. The profile begins with a demographic description of Hawai'i's population. AIDS surveillance data are used in Chapter III, IV and V, and include information on trends of AIDS incidence, prevalence and mortality. HSPAMM data are used only in Chapter III. Sexually Transmitted Diseases (STD) and Hawai'i Syringe Exchange Program data appear in Chapter IV. HIV testing and counseling data, STD and TB Program data and AIDS Service Organization are of limited use for the profile and appear only in Chapter VI. A glossary of terminology is included in Appendix.

General Considerations Regarding the Profile

Because HIV (not AIDS) is not reportable in the state of Hawai'i as of the Year 2000, this profile relies heavily on AIDS surveillance data. Since effective therapies that slow the progression of HIV have become available in recent years, AIDS surveillance data no longer completely reflect trends in HIV transmission and do not accurately represent the need for prevention and care services[1]. Therefore, the AIDS surveillance data that much of this report is based upon should be viewed cautiously.

This profile was developed by the AIDS Surveillance Program, Hawai'i Department of Health. Data will usually be presented for the entire state since it would not be useful to analyze small numbers of cases in small geographic areas. Cases at the county level will be examined only when case numbers are sufficient. Population data used is from the mid-year census estimates supplied by the United States Census, 1999 State of Hawai'i Data Book or the 2000 U.S. Census. In order to compare the proportion of AIDS cases with the proportion of state population based on race/ethnicity, we continue to use the 1990 U.S. Census population or U.S. Census estimated population rather than the 2000 U.S. Census population. The reason is that the 2000 U.S. Census used multiracial data and the 1990 U.S. Census or U.S. Census estimated population allowed only one racial category to be chosen. The AIDS Surveillance data uses only one race to determine the race/ethnicity, and therefor the 2000 U.S. Census can not be used.

[1]Centers for Disease Control and Prevention. Pre-Press Proof: HIV/AIDS Surveillance Update. June 2000

The impact of AIDS on the population can be examined by year of diagnosis or by year of report. The trends in incidence are more accurately analyzed by date of diagnosis than date of report. Using the year of report avoids the problem of reporting delays, but it is influenced by changes in surveillance case definitions, changes in surveillance resources, or other external factors. Although monitoring the AIDS epidemic using the number of reported cases has some limitations, it has the advantage that data for the year can be analyzed shortly after the end of the year.

AIDS Surveillance case data on incidence, prevalence and death examined here are based on cases diagnosed, and data on gender, race/ethnicity, age at diagnosis, risk and county are based on cases reported. Only data on individuals whose resident state was Hawai'i at the time of diagnosis were used for analysis. To assure confidentiality and to protect the privacy of individuals with AIDS, numbers of cases less than four are not presented in the cross tabulations, unless the data are cumulative or statewide.

Throughout this report, AIDS cases in three time periods (before 1991, 1991-1995 and 1996-2000) will be studied in greater detail. Comparison of these periods allow changes in the epidemic to be clearly seen. Where possible, a distribution of the state's population is also shown. If AIDS were equally distributed among the various groups, each group's proportion of AIDS cases would match its proportion of the state population.

This epidemiologic profile includes data in many different forms. Here are some hints to keep in mind when studying them: (1). Understand what you are looking at, even if it means asking questions. The telephone number at AIDS Surveillance is (808) 733-9010. (2). Know the limitations of the data and their source. (3). Don't over-interpret small changes or differences. (4). Do look for inconsistencies with other sources of information. (5). Always remember what the numbers represent (e.g. number of cases versus rates, percentages or ratios).

For national AIDS data, contact the National Center for HIV, STD, and TB Prevention , Centers for Disease Control and Prevention (CDC), Atlanta, GA 30333, and request the most recent HIV/AIDS Surveillance Report. Telephone contact is (800) 458-5231. Also visit Website at http://www.cdc.gov.

Chapter II

The Demographics of Hawai'i's Population

General Description of the Population

The State of Hawai'i, which has a total land mass of 6,423.4 square miles, is a state whose residents inhabit seven separate and distinct islands (Table 2.1). The State of Hawai'i's four counties are Honolulu, Hawai'i, Maui, and Kaua'i. The Census 2000 population is 1,211,537 residents, an increase of 9.3% from 1990. Most of those people (876,156, 72.3%) live on the island of O'ahu, where growth during the 10-year census period was less than 5 percent. Hawai'i County's population remained the second in the state with 148,677 residents, an increase of 23.6% during the 10-year period. In Maui and Kaua'i Counties, the population increased 27.5% (128,094 residents) and 14.2% (58,463 residents), respectively, during the same time period.

Table 2.1 **1990 and 2000 Population by County**

County	Residents Inhabit Islands	1990 Population		2000 Population		% Change 1990 to 2000
		No.	%	No.	%	
Honolulu	O'ahu	836,231	75.5	876,156	72.3	4.8%
Hawai'i	Hawai'i	120,317	10.9	148,677	12.3	23.6%
Maui	Maui, Lana'i, Moloka'i	100,504	9.1	128,094*	10.6	27.5%
Kaua'i	Kaua'i, Ni'ihau	51,177	4.6	58,463	4.8	14.2%
Total		**1,108,229**	**100**	**1,211,537**	**100**	**9.3%**

Source: U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary file, Table PL1.
* There are 147 persons from Kalawao County not included

As high as 21.4% Hawai'i residents reported multiracial heritage in the 2000 Census[2], giving the state a far larger percentage of multiracial inhabitants than the nation as a whole. Hawai'i is one of the most ethnically diverse states with a lack of clear racial and ethnic majority. According to the 1990 U.S.Census (Table 2.2), the state's racial composition is predominantly Asian and Pacific Islanders (61.8%). The Asian and Pacific Islander category includes Hawaiians, all Asian groups (Japanese, Filipino, Chinese, etc.), and all Polynesian groups. Caucasians comprise one-third (33.4%) of the total population, Hispanics comprise 7.3 percent (persons of Hispanic origin can be of any race). African Americans comprise 2.5% and Alaskan, Native American and other races comprise 2.4%.

The diversity of Hawai'i is further illustrated by the place of birth of its residents. In the 1990 census data, 26% of the resident population was born in another state in the U.S. and 18% was born outside the U.S. Twenty-five percent of the residents of Hawai'i speak a language other than English at home.

In 1997[3], the gender distribution was 50.3% male and 49.7% female, and the median age was 35.7 years. The population density was 185.0 persons per square mile, which was more than

[2]Source: U.S. Census Bureau, Census 2000 Redistricting Data (P.L. 94-171) Summary file, Table PL1.

[3]Centers for Disease Control and Prevention. 1999 Hawai'i State health Profile. 1999, XII

Table 2.2 1990 and 1999 Population by Race/Ethnicity				
Race and Hispanic origin	**90 Population**		**99 Population**	
	No.	**%**	**No.**	**%**
Caucasian	369,616	33.4	391,489	33.0
African American	27,195	2.5	33,752	2.8
American Indian, Eskimo, or Aleut	5,099	0.5	6,565	0.6
Asian or Pacific Islander	685,236	61.8	753,691	63.6
Japanese	247,486	22.3	NA	
Filipino	168,682	15.2	NA	
Hawaiian	138,742	12.5	NA	
Chinese	68,804	6.2	NA	
Korean	24,454	2.2	NA	
Samoan	15,034	1.4	NA	
Vietnamese	5,468	0.5	NA	
Other Asian or Pacific	16,566	1.5	NA	
Other race	21,083	1.9	NA	
Hispanic origin*	81,390	7.3	95,456	8.1
All Races	**1,108,229**	**100.0**	**1,185,497**	**100.0**

Source: The State of Hawai'i Data Book 1999. * The Hispanic population may be of any race.

twice the density nationally (75.6). Among state residents 25 years and over, 83.7 percent were at least high school graduates and 22.5 percent had completed a bachelor's degree. 13.9 % of the state population and 19.1% of school-age children were living below the poverty level.

To add to the complexity and diversity of Hawai'i's population, 6,430,300 visitors vacationed or conducted business in Hawai'i in 1994. Fifty-four percent of these visitors were male and 46 percent were female. More than 85 percent of these visitors listed pleasure as their main reason for visiting the islands, and their average stay was about seven days.

Summary

- Hawai'i's cosmopolitan population makes it unique among the states.
- In the 2000, 72.3% of Hawai'i's residents live on the island of O`ahu and 27.7% live on six other islands.
- The ratio of males to females equals approximately one.
- Sixty-four percent of the state's population is of Asian and Pacific Islander ancestry in 1999. The largest API groups are Japanese, Filipino and Hawaiian.
- Caucasians comprised one-third of the state's population in 1999.
- African-Americans comprised 2.8 percent of the state's population in 1999.

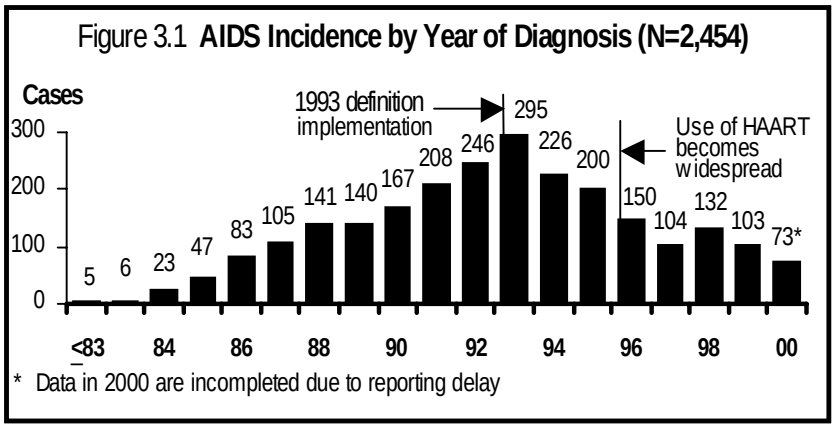
Chapter III

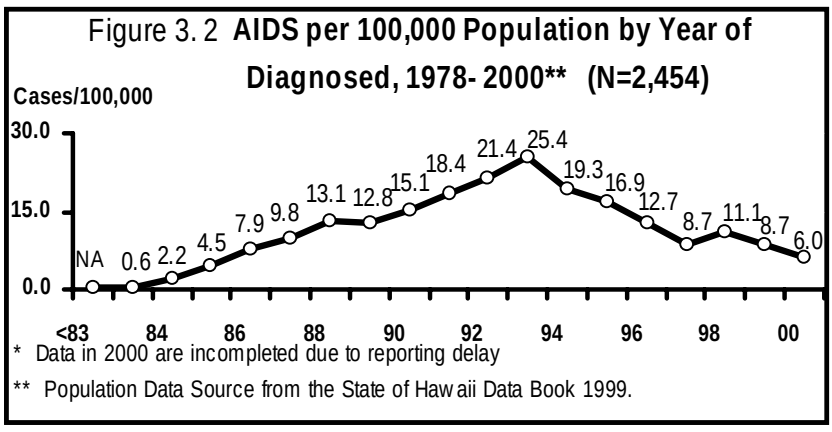
The Impact of HIV/AIDS on the Population

Hawai‘i AIDS Surveillance Data

Incidence is the number of new cases in a population within a certain time period and can be often used to measure disease frequency.

As of December 31, 2000, 2,454 AIDS cases have been diagnosed in Hawai‘i. The number of persons diagnosed with AIDS increased each year through 1993 (Figure 3-1). In 1993, the definition of AIDS was expanded and this resulted in an artifactual increase in the number of AIDS cases (295) diagnosed. The decline in the number of diagnosed cases began in 1994. Change in the definition of AIDS cases in 1993 ensured that many cases were diagnosed in 1993 that otherwise would had been diagnosed later. From 1996 forward, declines in AIDS incidence were associated with the widespread use of highly active antiretroviral therapy (HAART). The increased in AIDS cases in 1998 was likely due to the change in Hawai‘i Administration Rules which required laboratories to report low CD4 results to the Department of Health. This resulted in the additional cases identified. Figure 3-2 shows the AIDS rate[4] per 100,000 population from 1983 through 2000.





Because of the effect of treatment, AIDS incidence no longer accurately reflects HIV incidence trends like it once did. AIDS data now reflect a combination of factors, including: 1)

[4]The formula for calculating the AIDS incidence rate follows (For example in 1993):

$$\text{Incidence rate for 1993} = \frac{295 \text{ (Number of new } \textbf{\textit{Diagnosed}} \text{ AIDS cases in 1993)}}{1{,}161{,}508 \text{ (Total population in 1993)}} \times 100{,}000 = 25.4$$

Population are based on the State of Hawai‘i Data book 1999 and U.S. Bureau of the census 2000

variation in HIV transmission patterns over a long time period,; 2) differences in access to and use of testing and treatment among populations who are at risk or infected, and 3) potential failing treatments [5].

Ethnicity: The race/ethnicity information collected in AIDS report is determined through self identification. Although individuals may identify themselves as multi-ethnic, for purposes of this data set, they are counted only in the ethnic group with which they identify most. Except American Indians/Alaskans, the number of AIDS cases was highest in 1991-1995 and decreased in 1996-2000 for all groups (Table 3.1). Caucasians comprised the majority of cumulative AIDS cases (1,557) and had the highest percentage (63.4%) of AIDS cases, but account for only 33.4% of the state's population. Another group which had a higher proportion of AIDS cases than their proportion of population was African Americans (4.3% of AIDS cases versus 2.5% of the state population). All other racial/ethnic groups such as Hispanics, American Indian/Alaskans and Asian and Pacific Islanders (including Hawaiians, Filipinos, Japanese, Chinese and other APIs) had a lower proportion of AIDS cases than their proportion of population. The "Other API" category contains many different ethnic groups, each with too few cases to be shown separately.

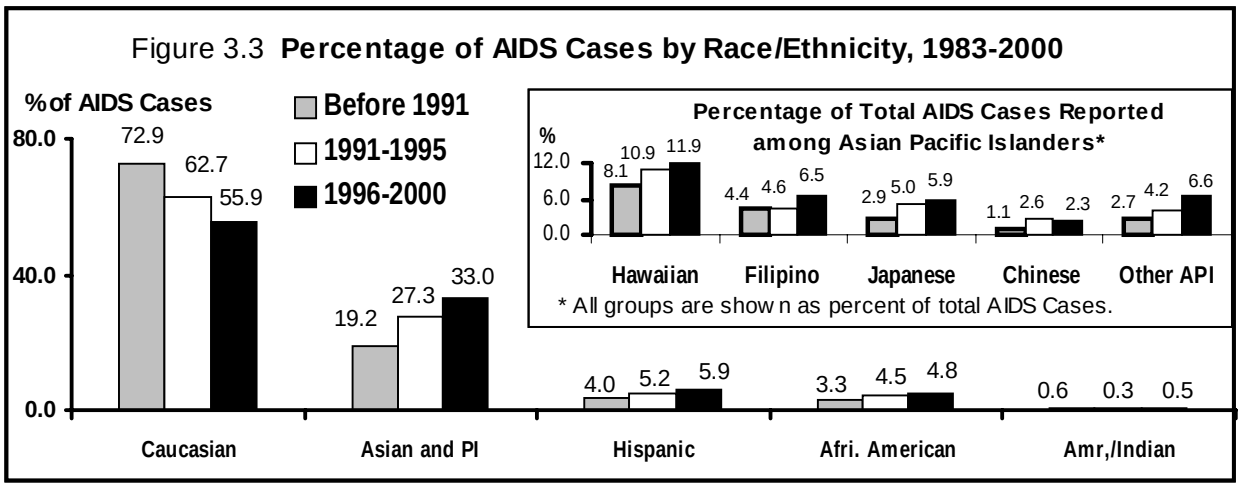
Table 3.1 **AIDS Cases by Race/Ethnicity, 1983-2000**

Race/ Ethnicity	**before 1991**	**1991-1995**	**1996-2000**	**Cumulative Total**		**1990 state Population**
	N	N	N	N	%	%
Caucasian	459	726	372	1,557	63.4%	33.4%
Afri. American	21	52	32	105	4.3%	2.5%
Hispanic	25	60	39	124	5.1%	7.3%
Asian and PI	121	316	220	657	26.8%	61.8%
Hawaiian	*51*	*126*	*79*	*256*	*10.4%*	*12.5%*
Filipino	*28*	*53*	*43*	*124*	*5.1%*	*15.2%*
Japanese	*18*	*58*	*39*	*115*	*4.7%*	*22.3%*
Chinese	*7*	*30*	*15*	*52*	*2.1%*	*6.2%*
Other API	*17*	*49*	*44*	*110*	*4.5%*	*5.6%*
Amr./Indian	4	4	<4	*11*	0.4%	0.4%
Total	**630**	**1,158**	**666**	**2,454**	**100%**	**100%***

* Includes 2.0% others.

The proportional distribution of AIDS cases among racial/ethnic groups has changed over time since the beginning of the epidemic (Figure 3-3). The proportion of cases among Caucasians decreased from 72.9% before 1991 to 62.7% in 1991-1995, to 56.0% in 1996-2000, while it increased among Hispanics, African-Americans and Asian/Pacific Islanders (including Hawaiians, Filipinos, Japanese, and other APIs).

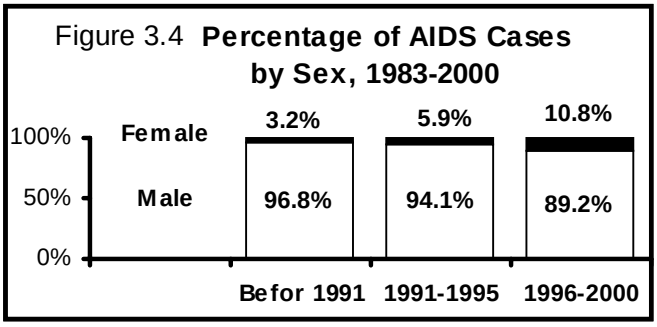
[5]Centers for Disease Control and Prevention. Pre-Press Proof: HIV/AIDS Surveillance Update. June 2000



Gender: As of December 31, 2000, 2,294 male and 160 female AIDS cases were reported in Hawai'i (Table 3.2). The proportion of AIDS cases among males decreased from 96.8% before 1991, to 94.1% in 1991-1995, to 89.2% in 1996-2000 (Figure 3.4). The percent decline in the number of male AIDS cases from 1991-1995 to 1996-2000 was - 45.5%. Though the decline in number of cases is being reported among men, more than four-fifths of AIDS cases reported still were among men in 1996-2000. An increasing proportion and number of AIDS cases is being reported among females, from 3.2% (20 cases) before 1991, to 5.9% (68 cases) in 1991-1995, to 10.8% (72 cases) in 1996-2000. The percent change in the number of female AIDS cases from 1991-1995 to 1996-2000 was +5.9%.

Table 3.2 **AIDS Cases by Sex, 1983-2000**

Sex	Before 1991	1991-1995	1996-2000	Cumulative Total	
	N	N	N	N	%
Male	610	1,090	594	2,294	93.5%
Female	20	68	72	160	6.5%
Total	630	1,158	666	2,454	100%



Age: There is usually a long period of time from initial HIV infection to an AIDS diagnosis.[6] Recent advances in HIV treatment are increasing that time interval because the treatment have dramatically slowed the progression of the disease in persons infected with HIV.

The median age of AIDS diagnosis was 36 years before 1991, 38 years in 1991-1995 and 39 years in 1996-2000. The majority of AIDS cases are in the 30-39 years of age group (1,079, 44.0%) or 40-49 years (750, 30.6%) (Table 3.3). There have been 16 cumulative pediatric cases (12 years of age or less) reported in Hawai'i, 2 cases before 1991, 11 cases in 1991-1995 and 3 cases in 1996-2000. On average, there has been less than one pediatric AIDS case per year . Over

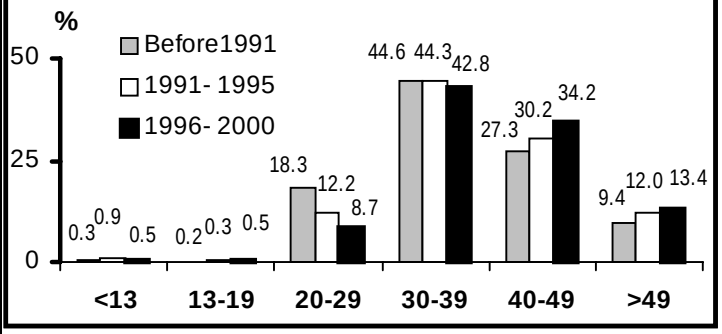
[6] The Surgeon General's Report to the American Public on HIV infection and AIDS. The U.S. DHHS/PHS, The Office of the Surgeon General. 1993.

time, there was a decrease in the proportion of AIDS cases in the 20-29 age group (18.3% before 1991, to 12.2% in 1991-1995, to 8.7% in 1996-2000), a slight decrease in the proportion of AIDS cases in the 30-39 age group**,** and an increase in the proportion for those in their forties and over. (Figure 3.5).

Table 3.3 **AIDS Cases by Age Group 1983-2000**

Age	Before 1991	1991-1995	1996-2000	Cumulative Total	
	N	N	N	N	%
<13	<4	11	<4	16	0.7%
13-19	<4	4	<4	8	0.3%
20-29	115	141	58	314	12.8%
30-39	281	513	285	1,079	44.0%
40-49	172	350	228	750	30.6%
>49	59	139	89	287	11.7%
Total	630	1,158	666	2,454	100%

Figure 3.5 **Percentage of AIDS Cases by Age Group, 1983-2000**



Risk: The mode of transmission is related to behaviors that put an individuals at risk for acquiring HIV infection. Risk information is classified in a hierarchy based on the likelihood of transmission. A person with AIDS may have had several risk factors but only the highest priority risk is counted. Only one dual risk, male to male sex also having injection drug use (MSM/IDU), is listed as one risk category.

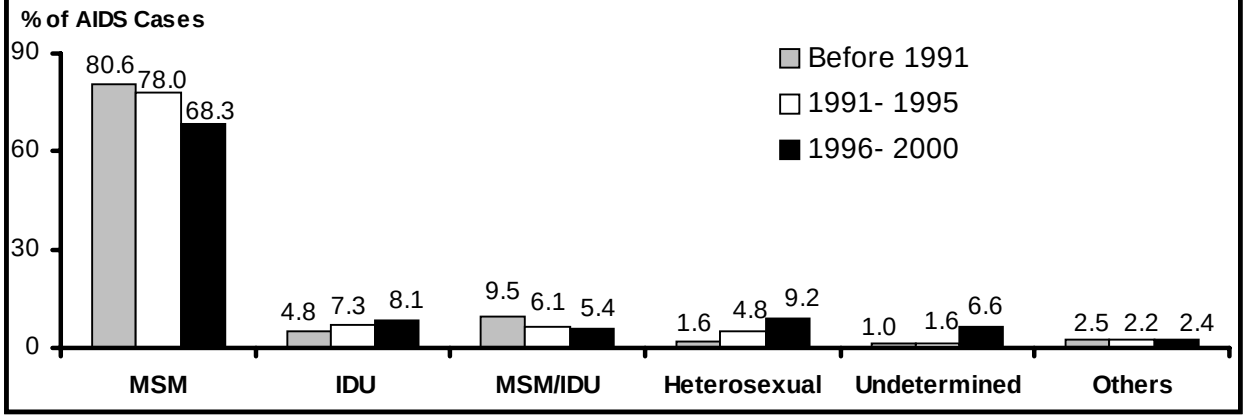
MSM comprise the majority of cumulative reported AIDS cases (1,866, 76.0%) (Table 3.4). By adding MSM/IDU, the total increase to 2,033 AIDS cases (82.8%). IDU was the second highest risk behavior, accounting for 168 AIDS cases (6.8%) for Hawai'i's AIDS epidemic. Cases attributed to heterosexual contact (127, 5.2%) were still relatively few in number, but increasing from 10 cases before 1991 to 56 cases in 1991-1995, to 61 cases in 1996-2000.

Table 3.4 **AIDS Cases by Risk**, **1983-2000**

Risk Factor	Before 1991	1991-1995	1996-2000	Cumulative Total	
	N	N	N	N	%
MSM	508	903	455	1,866	76.0%
IDU	30	84	54	168	6.8%
MSM/IDU	60	71	36	167	6.8%
Heterosexual	10	56	61	127	5.2%
Transfusion	10	7	9	26	1.1%
Hemophiliac	5	10	4	19	0.8%
Perinatal	1	9	3	13	0.5%
Undetermined	6	18	44	68	2.8%
Total	630	1,158	666	2,454	100.0%

Though there were more cases attributed to MSM than all other risks combined, the proportion of AIDS cases attributed to MSM had decreased (Figure 3.6), from 80.6% before 1991, to 78% in 1991-1995, to 68.3% in 1996-2000. The downward shift can also be seen in MSM/IDU, from 9.5% before 1991, to 6.1% in 1991-1995, to 5.4% in 1996-2000. The increase in proportion attributed to IDU was relatively slight in the current period, from 7.3% in 1991-

Figure 3.6 **Percentage of AIDS Cases by Risk, 1983-2000**



1995 to 8.1% in 1996-2000. The increase in proportion attributed to heterosexually acquired AIDS was greater, from 1.6% before 1991, to 4.8% in 1991-1995 and to 9.2% in 1996-2000.

Table 3.5 **AIDS Cases by County, 1983-2000**

County	Before 1991		1991-1995		1996-2000		Cumulative	
	N	%	N	%	N	%	N	%
Honolulu	485	77.0%	832	71.8%	479	71.9%	1,797	73.2%
Hawai‘i	72	11.4%	165	14.2%	79	11.9%	316	12.9%
Maui	46	7.3%	112	9.7%	81	12.2%	239	9.7%
Kaua‘i	27	4.3%	49	4.2%	27	4.1%	103	4.2%
Total	630	100%	1,158	100%	666	100%	2,456	100.%

County: Reported AIDS cases by county are shown in Table 3.5. The number of AIDS cases was highest in 1991-1995 and decreased in 1996-2000 for each county. Over two-thirds of AIDS cases were reported in Honolulu County. When comparing the 1991-1995 to 1996-2000 periods, the proportion of AIDS cases in Maui County increased (from 9.7% to 12.2%), remained the same in Honolulu and Kaua‘i Counties, and decreased in Hawai‘i County (14.2% to 11.9%).

Figure 3.7 **Reported AIDS Rates by County, 1983-2000**

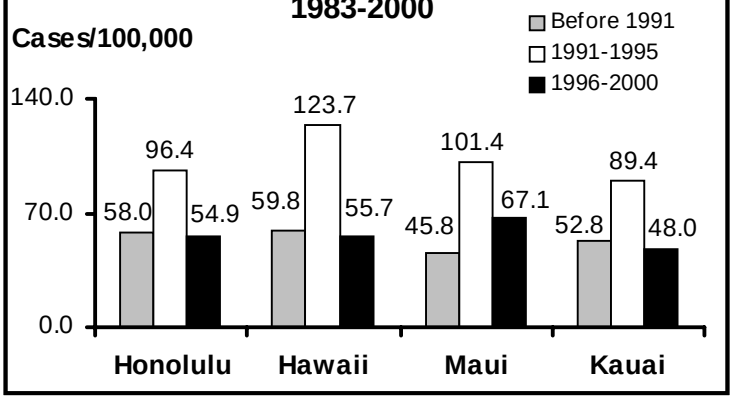


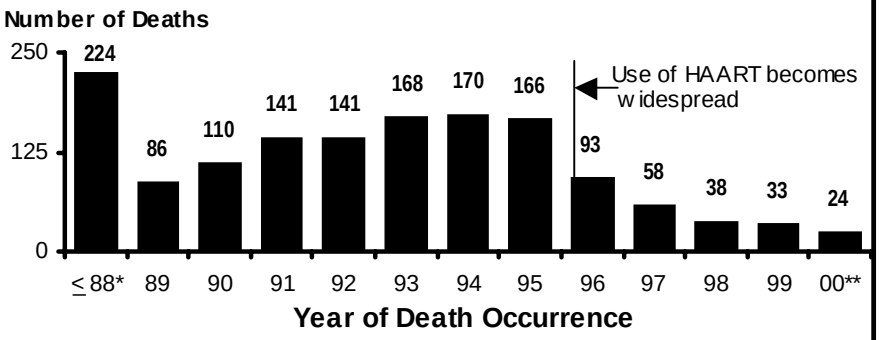
Figure 3.7 shows AIDS rates (per 100,000 population) by county. AIDS rates were highest in 1991-1995 and decreased in 1996-2000 for each county. In 1996-2000, Maui County had the highest AIDS rate (67.1), followed by Hawai‘i (55.7), Honolulu (54.9) and Kaua‘i (48.0).

AIDS-Related Deaths: HIV infection was the leading cause of death in Hawai‘i in the 25-34 year age group, and the second leading cause of death among those 35 to 44 years old in 1993 [7].

[7]Kong, V. L . Mortality due to HIV infection in Hawai‘i, 1984-1993. Research and Statistics Report; issue no. 64. Honolulu, Hawai‘i: Hawai‘i Department of Health, Office of Health Status Monitoring.

Since 1996, highly active antiretrovial therapy has been widely used, and deaths due to HIV have decreased. By 1999, HIV infection was the seventh leading cause of death in Hawai'i in the 25-44 year age group[8].

Figure 3.8. **AIDS-Related Death (N=1,452)**



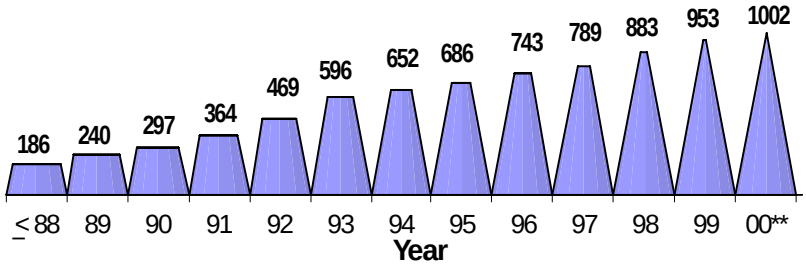
* Data in 2000 are incompleted and was recorded on the death certificates until Oct., 2000.

** Data for ≤ 1988* include 8 persons whose date of death occurrence are unknown.

Figure 3.8 shows trends in AIDS-related deaths. As of December 31, 2000, there were 1,452 AIDS-related deaths reported in Hawai'i. Deaths peaked in 1994 with 170 then declined annually. The number of deaths declined at an average of 38.8% every year from 1996 through 1998. Thirty three deaths occurred in 1999, an 80.6% decline compared to 170 deaths in 1994, and a 13.2% decline compared to the 38 deaths in 1998. The decrease of AIDS –related deaths has been ascribed largely to the effect of new successful treatments.

Persons Living with AIDS Since the number of newly diagnosed AIDS cases each year has exceeded the number of deaths, the number of persons living with AIDS continues to increase (Figure 3.9). At the end of 2000, a total of 1,002 persons were living with AIDS in Hawai'i resulting in the prevalence rate of 82.7 AIDS cases per 100,000 population.

Figure 3.9 **Persons Living with AIDS at end of each Year***



* Data caculation based on year of diagnosis and data are provional due to reporting delay.

** Data for 2000 are incomplete and the last update for deaths was October, 2000.

The number of persons living with AIDS (953) in 1999 was over 100% higher than in 1992. The number of persons living with AIDS increased on average of 8.6% every year from 1996 through 1999. The increase in the number of persons living with AIDS in the past 5 years was partially a result of new successful treatment therapies, which resulted in a decrease in the number of deaths, even though the number of individuals newly diagnosed with AIDS decreased. The increase in the total number of persons living with AIDS has an important impact on the resources needed for health services.

[8]The cause of death codings have changed so the results may not be comparable with 1993. Source: Hawai'i Department of Health, Office of Health Status Monitoring. Unpublished data.

Of these 1,002 individuals reported living with AIDS, 915 are male and 87 female. Most persons living with AIDS (755, 75.3%) were aged 30-49 years old at diagnosis. Honolulu County had the highest number and percentage (689, 68.8%) of persons living with AIDS (Table 3.6), followed by Hawai'i County (152, 15.2%), Maui County (124, 12.4%), and Kaua'i County (37, 3.7%). At the end of 2000, Hawai'i County had the highest prevalence rate (102.2 per 100,000 population), followed by Maui (96.7), Honolulu (78.6) and Kaua'i (63.3).

Table 3.6 **Persons Living with AIDS by Select Characteristic, as of December 31, 2000**

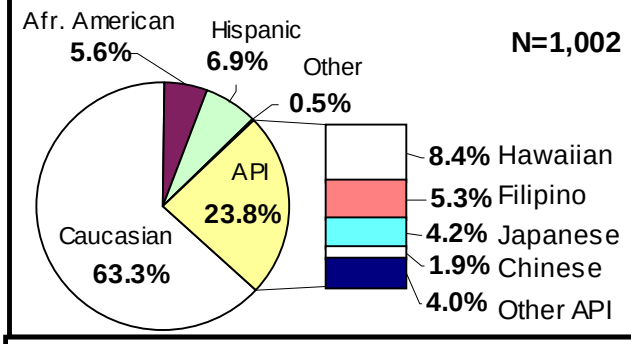
Race/Ethnicity	N
Caucasian	634
Afri. American	56
Hispanic	69
Other	5
Asian and PI	238
Hawaiian	84
Filipino	53
Japanese	42
Chinese	19
Other API	40
Total	**1,002**

Risk	N
MSM	718
IDU	79
MSM/IDU	73
Heterosexual	72
Transfusion	12
Perinatal	5
Hemophilia	6
Undetermined	37
Total	**1,002**

County	N
Honolulu	689
Hawai'i	152
Maui	124
Kaua'i	37
Total	**1,002**

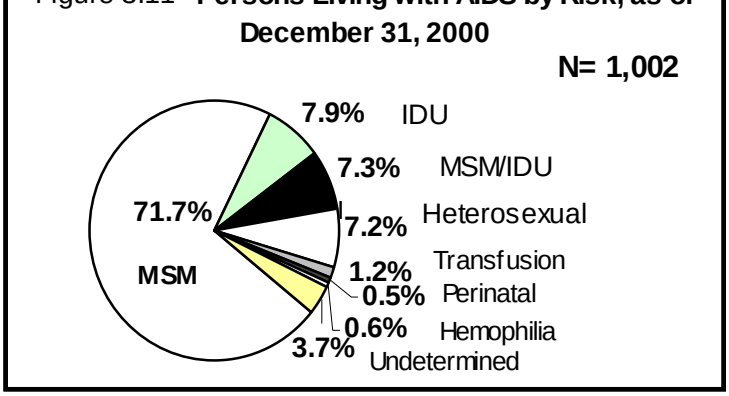
The majority of individuals living with AIDS were Caucasians (63.0%, 634 cases) (Figure 3.10 and Table 3.6), followed by APIs (23.6%, 238 cases), Hispanics (6.9%, 69 cases), African-Americans (5.6%, 56 cases) and other (0.5%, 5 cases). Among APIs, Hawaiians accounted for 8.3% (84 cases) of total living AIDS cases, followed by Filipinos (5.3%, 53 cases), Japanese (4.2%, 42 cases), Chinese (1.9%, 19 cases) and other APIs combined (4.0%, 40 cases).

Figure 3.10 **Persons Living with AIDS by Race/Ethnicity, as of December 31, 2000**



The Figure 3.11 shows persons living with AIDS by risk behaviors. The majority of people living with AIDS acquired their HIV via MSM (71.7%, 718 cases). The second and third highest risk behaviors were IDU (7.9%, 79 cases) and MSM/IDU (7.3%, 73 cases). Heterosexual contact accounted for 72 (7.2%) of the cases.

Figure 3.11 **Persons Living with AIDS by Risk, as of December 31, 2000**



HSPAMM HIV Positive (non-AIDS) Case Data

Due to the legal requirement for reporting, AIDS is a reportable disease and AIDS data are relatively complete in Hawai'i. HIV(non-AIDS) is not a reportable disease as of December 31, 2000, and HIV data (non-AIDS) are not available in the population base. It is estimated that there are between 2,300 and 3,200 persons with HIV infection in Hawai'i. Though we do not have statewide population data for HIV only (non-AIDS), we do have a data source that provides information on a large number of HIV cases through their participation in the Hawai'i Seropositivity and Medical Management (HSPAMM) Program. Keep in mind, HSPAMM data may not be representative of all persons who have HIV infection in Hawai'i, because participation in HSPAMM is voluntary and some persons with HIV infection may not enroll in the HSPAMM Program.

Despite these limitations, the HSPAMM data do include many HIV cases that are not included in the AIDS Surveillance data. Despite the possibility that some groups living with HIV are under-represented, an examination of the HSPAMM data can shed some light on more recent patterns of infection. To provide a clear focus on more recent infections, the tables below include only those HSPAMM enrollees who did not have AIDS (HIV positive only) at the time they enrolled. The same definition was applied to data on HSPAMM enrollees that was employed in AIDS Surveillance for the same period.

There were 1,369 persons with HIV infection (non-AIDS) enrolled in the HSPAMM Program from 1989 through 2000. There were 903 persons in 1989-1995 and 466 persons in1996-2000. The difference in the enrollment may be explained by the 1993 definition change.

Race/Ethnicity: Table 3.7 shows the HSPAMM HIV positive (non-AIDS) cases for two periods by race/ethnicity. The basic conclusions are consistent with those of the AIDS Surveillance data previously reported. Caucasians are the major race group, with a higher proportion of either AIDS cases or HIV positive (non-AIDS) cases. Yet we also see in both data sources that the proportion of cases for Caucasians is decreasing, as the proportion who are Caucasian is lower for more recent cases than for those in the past. Asian and Pacific Islanders (APIs) account for a larger proportion of more recent cases than of cases in the past. Among Asian and Pacific Islander groups, the Hawaiian and Part-Hawaiian group accounts for more cases than any other. Interestingly, however, the second largest

Table 3.7 **HSPAMM HIV Positive (non-AIDS) Cases by Race/Ethnicity, 1989-2000**

Race/Ethnicity	1989-1995		1996-2000		Cumulative Total	
	No.	%	No.	%	No.	%
Caucasian	635	70.3	265	56.9	900	65.7
Afr. American	34	3.8	29	6.2	63	4.6
Hispanic	58	6.4	38	8.2	96	7.0
Asian/ PI	151	16.7	103	22.1	254	18.6
Haw./PtHaw.	*72*	*8.0*	*41*	*8.8*	*113*	*8.3*
Filipino	*16*	*1.8*	*13*	*2.8*	*29*	*2.1*
Chinese	*15*	*1.7*	*7*	*1.5*	*22*	*1.6*
Japanese	*23*	*2.5*	*15*	*3.2*	*38*	*2.8*
Other API	*25*	*2.8*	*27*	*5.8*	*52*	*3.8*
Other	25	2.8	31	6.7	56	4.1
Total	903	100	466	100	1,369	100

number of API HIV positive (non-AIDS) cases is for Japanese rather than Filipinos as in the AIDS data. The proportion of cases that are African-American and Hispanics, although small, are increasing.

Gender: There were 1,277 (91.5%) men and 119 (8.5%) women with HIV positive (non-AIDS) enrolled in the HSPAMM. Figure 3.12 shows the HSPAMM HIV-positive only cases for two periods by sex. Similar to the AIDS data, the number and proportion of HSPAMM HIV positive (non-AIDS) cases that are male is larger, but are evidently decreasing. The proportion of HIV positive (non-AIDS) cases that are female is increased in the last five years.

Figure 3.12 **HSPAMM HIV Positive (non-AIDS) Cases by Sex, 1989-2000**

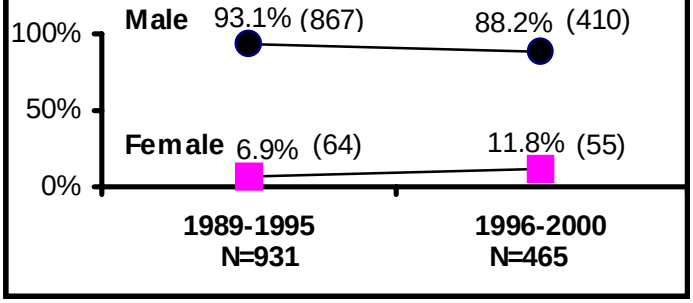


Table 3.8 **HSPAMM HIV Positive (non-AIDS) Cases by Age, 1989-2000**

	1989-1995		1996-2000		Cumulative Total	
Age	No.	%	No.	%	No.	%
13-19	<4	0.2	<4	0.4	4	0.3
20-29	216	23.5	68	15.0	284	20.7
30-39	430	46.8	199	43.9	629	45.8
40-49	216	23.5	135	29.8	351	25.6
>49	55	6.0	49	10.8	104	7.6
Total	919	100	453	100	1,372	100

Age: The majority of HSPAMM HIV positive cases were enrolled between the ages of 30-39 (629, 45.8%, Table 3.8), followed by age 40-49 (351, 25.6%), age 20-29 (284, 20.7%) and age over 49 (104, 7.6%). Over time, the proportion of HSPAMM HIV positive (non-AIDS) cases in the 20-29 age group declined, the 30-39 age group slightly declined, and the 40-49 and over 49 age group increased. Age at enrollment for HSPAMM HIV positive cases has the same pattern as AIDS surveillance data.

Table 3.9 **HSPAMM HIV Positive (non-AIDS) Cases by Risk, 1989-2000**

Risk	1989-1995		1996-2000		Cumulative Total	
	No.	%	No.	%	No.	%
MSM	681	74.2	313	68.8	994	72.4
IDU	68	7.4	27	5.9	95	6.9
MSM/IDU	86	9.4	41	9.0	127	9.2
Heterosexual	56	6.1	54	11.9	110	8.0
Unknown/Others	27	2.9	20	4.4	47	3.4
Total	918	100	455	100	1,373	100

Risk: The overwhelming majority of HSPAMM HIV positive (non-AIDS) cases are among MSM (994, 72.4%, Table 3.9). Similar to the AIDS data, MSM and MSM/IDU proportion of cases shows a decline, and the heterosexual proportion of cases shows an upward trend. What looks different in these figures than in the AIDS data is that the IDU proportion of cases shows a downward trend in HSPAMM data, while it shows an upward trend in AIDS Surveillance data . The IDU proportion of HIV positive (non-AIDS) cases is lower than the IDU proportion of AIDS cases in 1996-2000 (5.9% vs 8.1%). The heterosexual proportion of HIV positive (non-AIDS) cases is greater than the heterosexual proportion of AIDS cases in1996-2000 (11.9% vs 9.2%). If the HSPAMM data is truly reflecting

more recent infections, the comparison suggests that the trend shown in the AIDS data has continued in the more recent past.

County: Table 3.10 shows HSPAMM's HIV positive (non-AIDS) cases by county of enrollment. Over time, the proportion of HIV cases in Honolulu and Hawai'i Counties decreased, Kaua'i County remained the same, while Maui County increased.

Table 3.10 **HSPAMM HIV Positive (non-AIDS) Cases by County, 1989-2000**

	1989-1995		1996-2000		Cumulative Total	
County	No.	%	No.	%	No.	%
Honolulu	692	73.4	334	70.2	1,026	72.3
Hawai'i	114	12.1	53	11.1	167	11.8
Maui	101	10.7	72	15.1	173	12.2
Kaua'i	36	3.8	17	3.6	53	3.7
Total	943	100	476	100	1,419	100

As a generalization, this examination of the HSPAMM data has reinforced the understanding of change over time in Hawai'i's HIV/AIDS epidemic based on the AIDS data. Trends we can see in the AIDS data indicate changes in who was at risk between ten and twenty years ago. The similar patterns of change over time within the set of HSPAMM HIV positive (non-AIDS) cases also support these trends. This conclusion is warranted despite concerns over how representative HSPAMM cases are of HIV-positive people in general. Based on the combined analyses, we can be clear not only regarding which groups are at greater or lesser risk, but also which groups are experiencing increasing risk. These conclusions are a crucial starting point for thinking about where and how to direct prevention efforts.

Summary

AIDS Surveillance Data

- A cumulative total of 2,454 AIDS cases were reported in Hawai'i as of December 31, 2000. Of these, 1,452 are known dead. The annual incidence rate of AIDS increased gradually since the beginning of the epidemic, peaking in 1993. It has decreased in recent years. In 1993, the high rate is partly a result of the change in CDC's AIDS case definition.

- The decline in AIDS incidence and AIDS-related death shown since 1996 is due to the successful treatment therapies introduced that delay the progression of HIV infection to AIDS and death.

- For Caucasians and African-Americans, the proportion of AIDS cases exceeds their proportion of the state population. For all other racial/ethnic groups, their proportion of AIDS cases is less than their proportion of the state's population.

- The proportion of AIDS cases among Caucasians has decreased from 72.9% before 1991 to 62.7% in 1991-1995 to 55.9% in 1996-2000, while it has increased among Hispanics, African-Americans and Asian/Pacific Islanders (including Hawaiians, Filipinos, Japanese, and other APIs) during the same time periods.

- Women account for an increasing proportion and number of AIDS cases (3.2% and 20 cases before 1991, to 5.9% and 68 cases in 1991-1995, to 10.8% and 72 cases in 1996-2000), but men still account for a considerably larger proportion and number for the same time periods.

- The majority of AIDS cases are in the 30-39 years of age group (1,079, 44.0%) or 40-49 years of age (750, 30.6%). Over time, there was a decrease in the proportion of AIDS cases in their twenties and an increase in the proportion for those in their forties and over 49. On average, there has been less than one case per year of pediatric AIDS (diagnosis before age 13).

- MSM is the largest behavioral risk factor group. The proportion of cases among MSM and MSM/IDU has decreased in the three time periods, while the proportions of AIDS cases attributed to IDU and heterosexual contact has increased in the three time periods.

- The majority of the state's AIDS cases (1,797, 73.2%) has been reported in Honolulu County. When comparing the 1991-1995 to 1996-2000 periods, the proportion of AIDS cases increased in Maui County (from 9.7% to 12.2%), remained the same in Honolulu and Kauaʻi Counties, and decreased in Hawaiʻi County (14.2% to 11.9%).

- In the most recent 5 year period, Maui County had the highest AIDS rate (67.1), followed by Hawaiʻi County (55.7), Honolulu County (54.9) and Kauaʻi County (48.0).

- The prevalence of persons living with AIDS continues to increase despite the fact that new AIDS case diagnoses have decreased. At the end of 2000, there were 1,002 persons living with AIDS in Hawaiʻi.

HSPAMM Data

- HSPAMM data of HIV positive (non-AIDS) cases shows a similar pattern to AIDS data. Caucasians are the largest group of HSPAMM HIV patients, and the proportion of cases for all other groups are increasing.

- The proportion of HIV positive (non-AIDS) cases among males is decreasing and the proportion among females is increasing.

- The proportion of HIV positive (non-AIDS) cases attributed to MSM and IDU is decreasing and cases attributed to heterosexual contact is increasing.

- The proportion of 1996-2000 infection in Maui County has increased and that in Honolulu County and Hawaiʻi County was slight decreasing. The proportion of cases in Kauaʻi County remained the same.

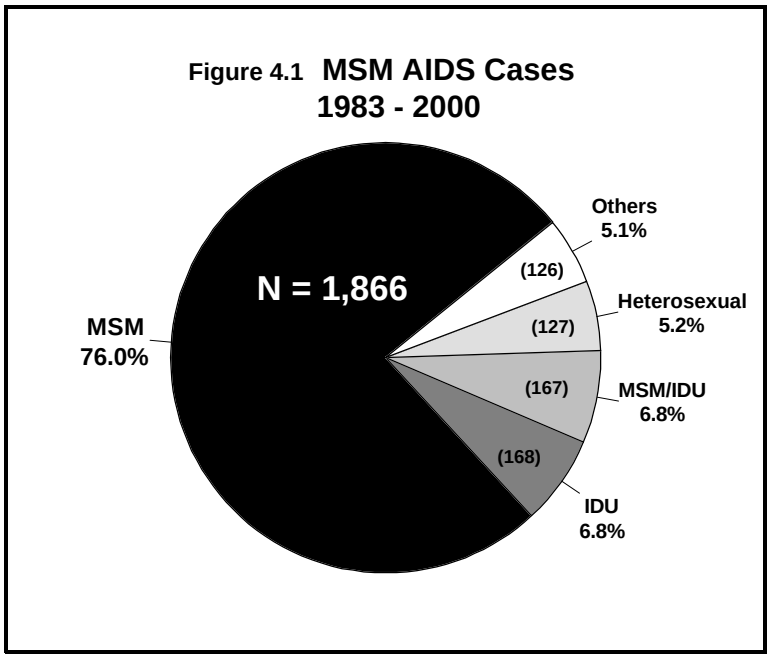
Chapter IV

Who is at Risk for HIV/AIDS?

Detailed Analysis

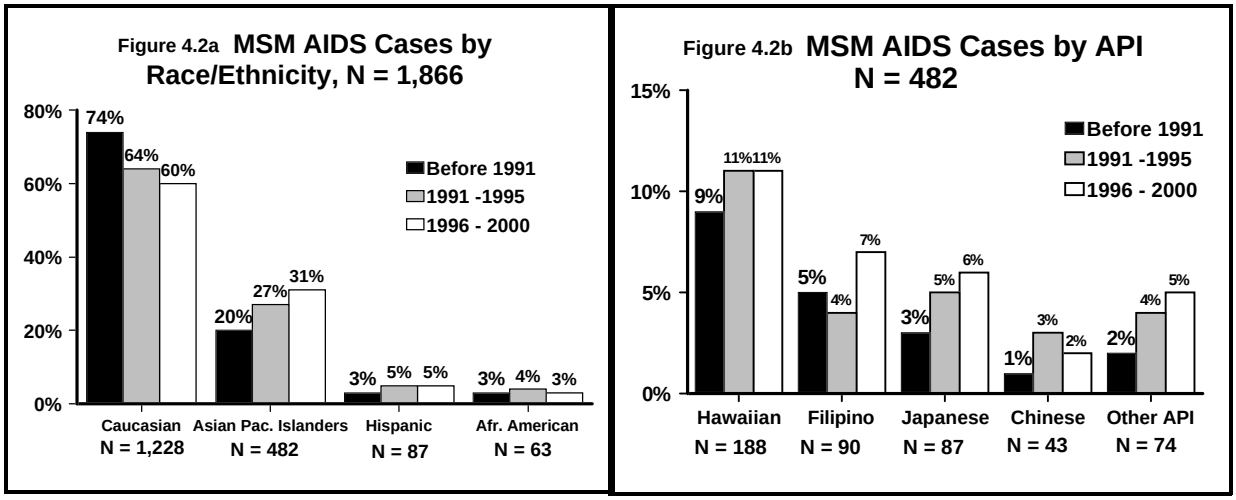
This chapter provides a more detailed analysis of the major risk behavior groups and other groups already previously identified as experiencing either higher-than-average risk or increasing risk. This chapter also provides data analysis for statewide HIV related programs. Risk of HIV infection depends on the presence of high-risk behavior, also the relative risk of the behavior, the frequency of high-risk behavior, and/or the level of HIV prevalence in the community.

Men who have Sex with Men (MSM)



In Hawai'i, MSM behavior is the most frequently reported AIDS risk factor. Figure 4.1 shows 1,866 or 76.0 % of all cases diagnosed from 1978 through December 2000 are attributed to MSM.

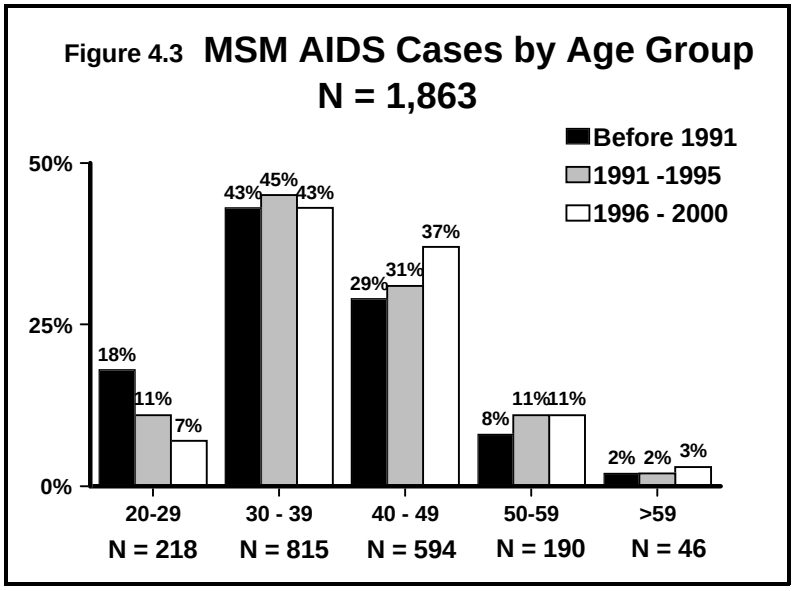
During the most recent five years (1996-2000), the majority (60%) of Hawai'i's total AIDS cases continued to be the MSM group. Figure 4.2a shows the percentage of MSM AIDS cases for race/ethnicity for three time periods (before 1991, 1991 - 1995, and 1996 - 2000). The proportion of cases for Caucasians due to MSM gradually and significantly declined from 74% before 1991 to 64% between 1991-1995, and 60% in the 1996-2000 period ($p < .05$). At the same time, the proportion of MSM AIDS cases for Asian Pacific Islanders (API) increased over time significantly from 20% before 1991 to 27% between 1991-1995 to 31% during 1996 - 2000 ($p < .05$). The proportion of MSM AIDS cases among Hispanics has remained constant at 5% last ten years. The number and proportion of MSM AIDS case among African Americans has decreased during the over the last five years. Figure 4.2b shows percentage of MSM cases for Asian Pacific Islander groups (API). Hawaiians/part Hawaiians



were the largest in this API group and their proportion has significantly increased over time. Hawaiians has remained the same for the last two periods and has increased for Filipinos and other Asian Pacific Islander groups (Other API). Table 4.1 details the racial and ethnic makeup of MSM cases over three time periods.

Table 4.1 **MSM AIDS Cases by Race/Ethnicity**

Race/Ethnicity	**Before 1991**		**1991 - 1995**		**1996-2000**		**Cumulative 1983-2000**	
	No.	%	No.	%	No.	%	No.	%
Caucasian	376	74.0	579	64.1	273	60.0	1,228	65.8
Asian & Pacific Islanders.	100	19.7	240	26.6	142	31.2	482	25.8
Hawaii /Part.Haw.	***43***	***8.5***	***95***	***10.5***	***50***	***35.2***	***188***	***35.9***
Filipino	***25***	***4.9***	***35***	***3.9***	***45***	***5.4***	***90***	***17.2***
Japanese	***13***	***2.6***	***47***	***5.2***	***44***	***5.2***	***87***	***16.6***
Chinese	***7***	***1.4***	***38***	***4.2***	***26***	***3.1***	***43***	***8.2***
Other API	***12***	***2.4***	***38***	***4.2***	***42***	***5.0***	***116***	***22.1***
Hispanic	16	3.1	48	5.3	23	5.1	87	4.7
African-American	14	2.8	34	3.8	15	3.3	63	3.4
Others	2	0.4	2	0.2	1	0.4	6	0.3
Total	**508**	**100**	**903**	**100**	**455**	**100**	**1,866**	**100**



The numbers of AIDS cases related to MSM have decreased for all race/ethnic groups for the last five year period compared to 1991-1995**.**

Figure 4.3 shows the percentage of MSM AIDS cases for different age groups. In each time period, the highest percentage of MSM AIDS cases were diagnosed in the 30-39 age group and followed by 40-49 age group. The percentage of MSM AIDS cases slightly decreased since 1991-1995 for 30-39 age group. At the same time, the percentage of MSM AIDS cases increased for 40-49 age group gradually from 29% before 1991 to 31% in 1991-1995 to 37% in the recent five year period.

Table 4.2 shows detail numbers and percentages of MSM AIDS cases for the three time periods. The most MSM AIDS cases (75.6%, 1,409/1863) were diagnosed in the 30 to 49 age group. Within this age group, if we see the case loads for two five year periods for ages 30-39, both number (402/901 to 194/454) and percentage (44.6% to 42.7%) have decreased, and case loads for ages 40-49 has increased from 31% (281/901) to 36.6% (166/454) from 1991-1995 in

Table 4.2 **MSM AIDS Cases by Age Group**

Age	**Before 1991**		**1991-1995**		**1996-2000**		**Cumulative 1982-2000**	
	No.	%	No.	%	No.	%	No.	%
20- 29	92	18.1	95	10.5	31	6.8	218	11.7
30-39	219	43.1	402	44.6	194	42.7	815	43.7
40-49	147	28.9	281	31.2	166	36.6	594	31.9
50-59	40	7.9	102	11.3	48	10.6	190	10.2
> 59	10	2.0	21	2.3	15	3.3	46	2.5
Total	**508**	**100**	**901**	**100**	**454**	**100**	**1,863**	**100**

Less than four cases (<4) were diagnosed for the 13-19 years of age group.

the recent five year period. The numbers (95/901 to 31/454) and percentages (10.5% to 6.8%) of MSM cases for the 20-29 age group has decreased since 1991-1995.

Summary

- MSM has remained the largest risk behavior group throughout the epidemic in Hawai'i, but this group's proportion of new cases is decreasing.

- 76.0 % of Hawai'i's AIDS cases have been reported in this risk behavior group and 82.8% of Hawai'i's AIDS cases have been reported in the duel risk behaviors groups of MSM and MSM/IDU.

- Caucasians comprise most of the MSM AIDS cases (1,228). However, their proportion has been gradually declining over time.

- Asians and Pacific Islanders have the second most MSM cases (482), and the proportion of MSM cases that are API has been increasing over time.

Injection Drug Users (IDUs)

IDU is the third major risk behavior for HIV in Hawai'i, and make up 168 (7%) of AIDS cases diagnosed through December 2000. IDU AIDS cases in Hawai'i comprise a much smaller percentage of total AIDS cases than is observed nationally. IDU AIDS cases account for 31% of the AIDS cases nationally from July 1996-June 2000 (five years) and 8% (54/666) of Hawai'i's AIDS cases for 1996-2000. The proportion of total AIDS cases attributed to IDU (Figure 3.6) in Hawai'i has significantly increased from 4.8% before 1991 to 7.3% in 1991-1995 and 8.1% in 1996-2000 ($p < .05$). Figure 4.4 shows IDU cases for males and females over two five year time periods. The proportion of IDU cases for males has increased from 60% to 62% over the last five years (1996-2000) compared to 1991-1995. The proportion for females has decreased from 40% in 1991-1995 to 38% in the recent five year period. The number of cases for both sexes has increased since 1991 -1995.

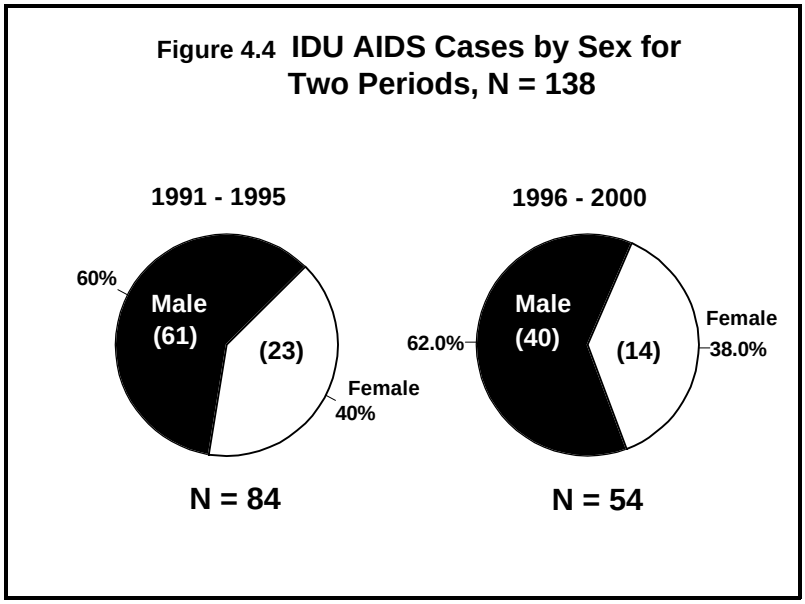
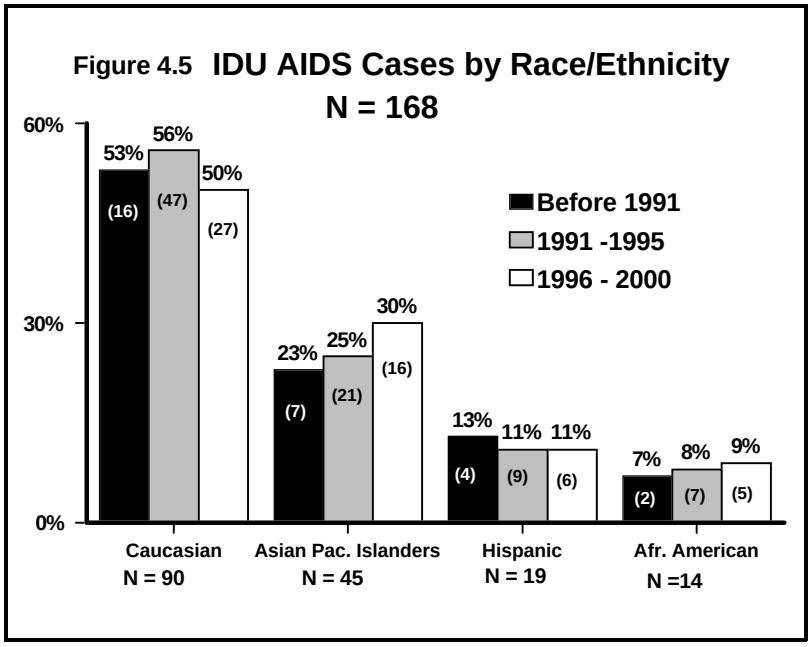


Figure 4.5 shows IDU AIDS cases by Race/Ethnicity. Most of the IDU AIDS cases are among Caucasians, followed by Asian Pacific Islanders (API). The proportions of total IDU AIDS cases among Caucasians and Hispanics has remained fairly constant over time. The number and percentage of Caucasian's IDU cases decreased in the recent five year period. The number of African-American IDU AIDS cases remains too small for trend analysis. The proportion of total IDU AIDS cases among



API is increasing.

Table 4.3 shows details of number and percentages for all race/ethnic groups for three time periods, as well as the cumulative cases of AIDS among IDU. The proportion of total IDU cases among Hawaiian and part-Hawaiians has decreased from 13% to 9% in the recent five year period, while the proportion of total IDU AIDS cases for other API groups has increased.

Table 4.3 **IDU AIDS Cases by Race/Ethnicity**

Race/Ethnicity	Before 1991		1991-1995		1996-2000		Cumulative	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Caucasian	16	53.3	47	55.3	27	50.0	90	53.3
Afr.-Ameri	2	6.7	7	8.2	5	9.3	14	8.3
Hispanic	4	13.3	9	10.6	6	11.1	19	11.2
API	7	23.3	22	27.0	16	29.6	45	26.6
Haw./Pt.Haw	*4*	*13.3*	*11*	*12.9*	*5*	*9.3*	*20*	*11.8*
Filipino	*0*	*0*	*4*	*4.7*	*3*	*5.6*	*7*	*4.1*
Chinese	*0*	*0*	*2*	*2.4*	*1*	*1.9*	*3*	*1.8*
Japanese	*0*	*0*	*2*	*2.4*	*2*	*3.7*	*4*	*2.4*
*OtherAPI**	*2*	*10.3*	*2*	*3.5*	*5*	*9.3*	10	*6.5*
Others	1	3.3	0	0	0	0.0	1	0.6
Total	**30**	**100.0**	**85**	**100.0**	**54**	**100**	**168**	**100**

Table 4.4 shows details of IDU cases for males and females by different age groups for two time periods. The highest proportion of male IDU cases in 1996 - 2000 is among 30 - 39 year olds age group. But for female, the highest proportion of IDU cases in 1996 - 2000 is among 40-49. The proportion and number of IDU cases in the 30 - 39 age group for both males and females has decreased from 1991 - 1995 to 1996 - 2000. At the same time the proportion and number IDU cases in the 40 49 age group for both males and females has increased from 1991 - 1995 to 1996 - 2000.

Table 4.4 **Total IDU AIDS Cases by Sex and Age**												
Age	**1991-1995**						**1996-2000**					
	Male		**Female**		**Total**		**Male**		**Female**		**Total**	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
20-29	8	13.1	4	17.4	12	14.3	3	7.5	3	21.4	6	11.1
30-39	30	49.2	17	73.9	47	56.0	18	45.0	3	21.4	21	38.9
40-49	19	31.2	2	8.7	21	25.0	15	37.5	5	35.7	20	37.0
> 49	4	6.6	0	0	4	4.8	4	6.3	3	21.4	7	13.0
Total	**61**	**100**	**23**	**100**	**84**	**100**	**40**	**100**	**14**	**100**	**54**	**100**

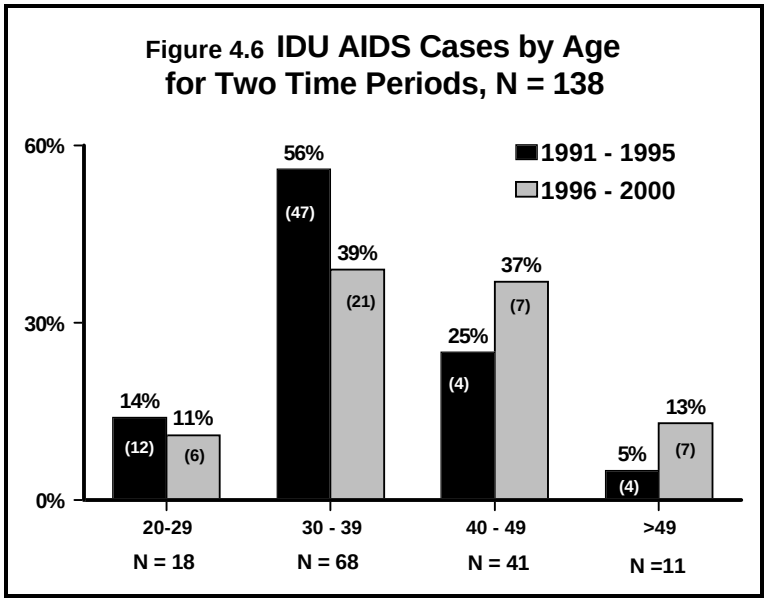
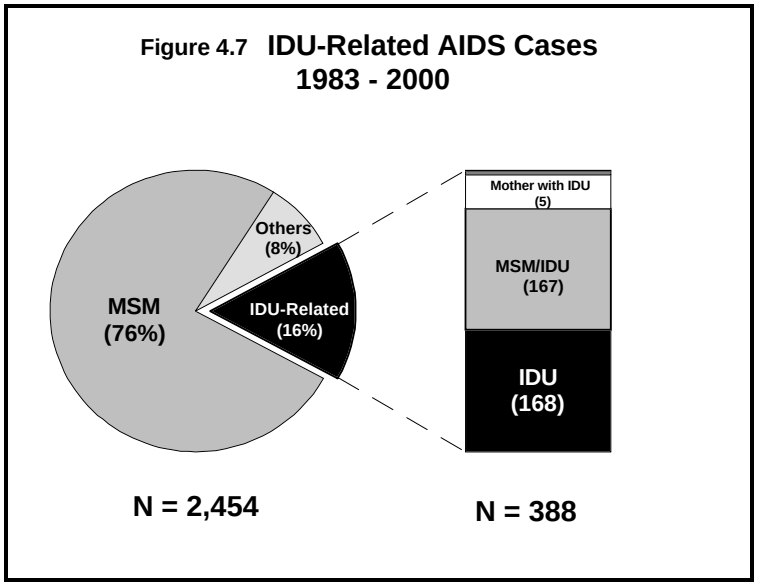


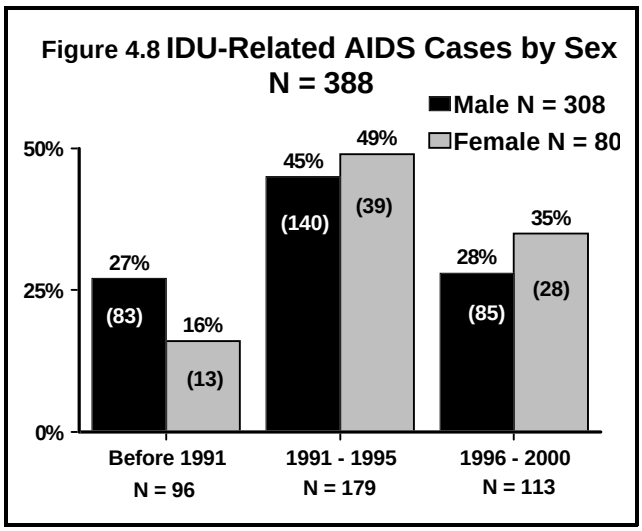
Figure 4.6 shows the proportion of IDU AIDS cases for different age groups for two time periods. Mor than half of the AIDS cases related to IDU is among the 30-39 age group and followed by 40-49 age group. The proportion of cases for 30-39 age group decreased and at the same time, the proportion of cases for 40-49 age group increased in recent periods compared to 1991-1995. The proportion and number of AIDS cases related to IDU has decreased for both the 20 - 29 and the 30 - 39 age groups. At the same time, the proportion and number of AIDS cases associated with IDU has increased for the 40 - 49 and the over 49 age groups.

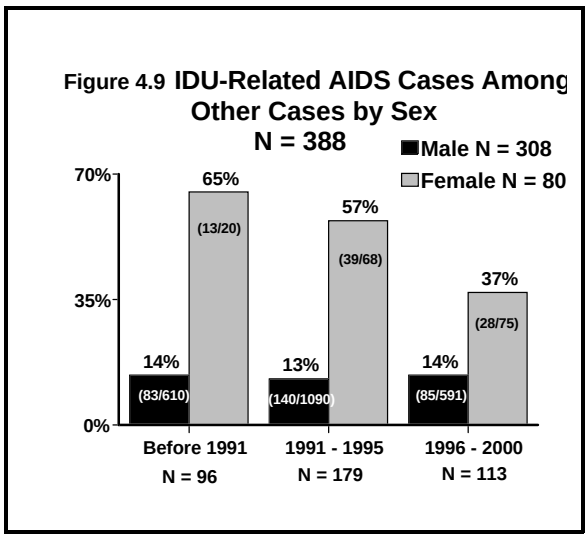
IDU- Related AIDS Cases

Through December 31, 2000, a cumulative total of 388 AIDS cases were associated with IDU (this includes IDU, IDU/MSM, mother with IDU, and mother who sex with an IDU). Of these, 43.2% (168 cases) were IDU, 43.0% (167 cases) were MSM/IDU, 1.3% (5 cases) were mother with IDU, and <1% (<4 cases) were mother who has sex with IDU (Figure 4.7).



The following graphs illustrate the impact of IDU - related AIDS cases among males and females. Figure 4.8 details 388 IDU-related AIDS cases by gender for three time periods. Of these, 13.4% (308/2294) were male and 50% (80/160) were female. The proportion of male or female AIDS cases related to IDU was highest in 1991-1995 with 45% (140) for males and 49% (39) for females. The proportion of male or female cases related to IDU has declined in the last five years. However, the proportion of IDU-related AIDS cases related to IDU is still higher for both males and females in 1996 - 200 compared to the proportion of before





1991 period. Figure 4.9 shows a higher percent of total AIDS cases in females than males were

related to injection drug use. Among female, 50% (80/160) AIDS cases were attributed to IDU - related risk factors. Of these, the proportion of cases for females declined from 65% (13/20) in before 1991 to 57% (39/68) in 1991 - 1995 and to 37% (28/75) in the last five years.

Hawai‘i Syringe Exchange Program Data

Needle sharing is an important risk factor for HIV infection among injection drug users. Hawai‘i has a statewide needle exchange program which is helping to reduce the potential spread of HIV among injection drug users. The Hawai‘i Syringe Exchange Program (SEP) recorded that 863,750 syringes were exchanged from 1996-2000. In 2000, 219,218 syringes were exchanged through 11,855 client visits, a 13.4% increase compared to the number of syringes exchanged during 1999.

Using a research project survey to evaluate Hawai‘i’s SEP and monitor the population of IDUs utilizing SEP services, 446 persons were interviewed at random, and their demographics are shown on Table 5.5. It should be noted that these data represent Hawai‘i’s IDU population who utilize the syringe exchange service and may differ from the IDUs who do not use the SEP. In this survey, the proportion of IDU females is 28.6% of the total SEP participants. The majority of SEP clients are Caucasians, followed by Asian/Pacific Islanders and Hawaiians/part-Hawaiians. 42.4% of SEP participants are in their forties.

According to the SEP program research, 24% of the subject in the research interviews reported that they had engaged in the risk behavior of sharing needles with someone

Table 4.5 **Characteristics of Participants in Hawai‘i Syringe Exchange Program**
1996-2000*

Sex		
Male	309	69.3%
Female	137	30.7%
Race/Ethnicity		
White	286	64.1%
Asian and PI*	53	11.9%
Hawaiian*	42	9.4%
Hispanic	30	6.7%
Af. American	13	2.9%
Other/mixed race	10	2.2%
Age		
13-19	2	0.4%
20-29	41	9.1%
30-39	142	31.8%
40-49	227	50.8%
> 49	34	7.6%
Total	**446**	**100**

*** Asians and Pacific Islanders do not include Hawaiians/part-Hawaiians as they are listed in a separate category.**

Summary

- IDUs are the third largest HIV risk group in Hawai‘i. However, IDU AIDS cases in Hawai‘i comprise a much smaller percentage (6.6%) of total AIDS cases than is observed nationally.

- The proportion of total AIDS cases attributed to IDU in Hawai‘i has increased over time.

- Caucasians comprise over half (90/1 68) of IDU AIDS cases.

- Asians and Pacific Islanders have the second largest number (45/168) of IDU AIDS cases and their proportion has been increasing.

- The proportion of total AIDS cases attributed to IDU has increased for females over time.

- Higher proportions of females AIDS cases are attributed to IDU and IDU related behavior (51.7%, 62 cases) as compared to males.

Men Who Have Sex With Men and Inject Drugs (MSM/IDU)

Through December 2000, there were 167 AIDS cases reported with the dual risk factors of MSM/IDU. Figure 4.10 shows proportions and numbers of cumulative MSM/IDU cases for different race/ ethnic groups. Most of the MSM/IDU cases (125 cases, 74.5%) are among Caucasians, followed by Asian and Pacific Islanders (API).

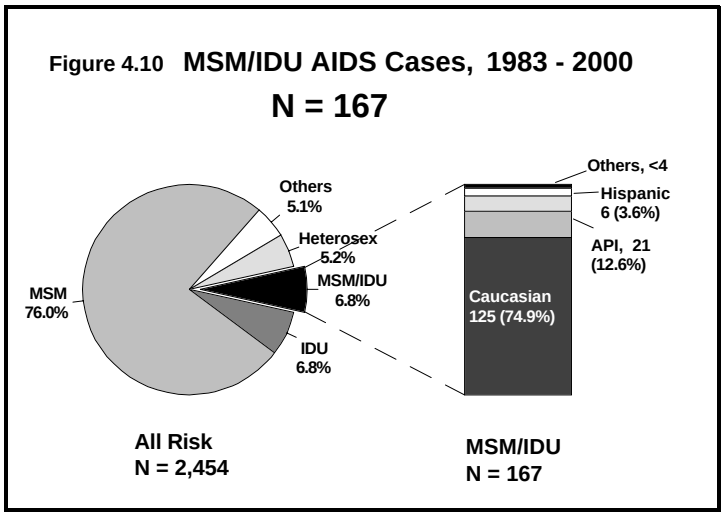


Table 4.6 details the number and proportion of MSM/IDU cases in race/ethnic groups. The proportion of and number of MSM/IDU AIDS cases for Caucasians has decreased in the last five years compared to before 1991 and the 1991 - 1995 period (statistically not significant, P>.05). API are the second largest group of MSM/IDU and show an increasing trend (significant, p< .05). The proportion of MSM/IDU AIDS cases among African-Americans has increased but this change is not statistically significant (p <.05).

Table 4.6 **MSM/IDU AIDS Cases by Race/Ethnicity**

Race/Ethnicity	Before 1991		1991 - 1995		1996-2000		Cumulative	
	No.	%	No.	%	No.	%	No.	%
Caucasian	50	83.3	50	70.4	25	69.4	125	74.9
Asian &Paci. Islan.	<4	3.3	12	16.9	7	19.4	21	12.6
Hawaii/Part.Haw.	***<4***	***1.7***	***5***	***7.0***	***4***	***11.1***	***10***	***6.0***
Other API	***<4***	***1.7***	***7***	***9.9***	***3***	***8.3***	***11***	***6.6***
Hispanic	<4	5.0	<4	2.8	<4	2.8	6	3.6
African-American	4	6.7	6	8.5	<4	5.6	12	7.2
Others	1	1.7	1	1.7	1	2.8	3	1.8
Total	60	**100**	**71**	**100**	**36**	**100**	**167**	**100**

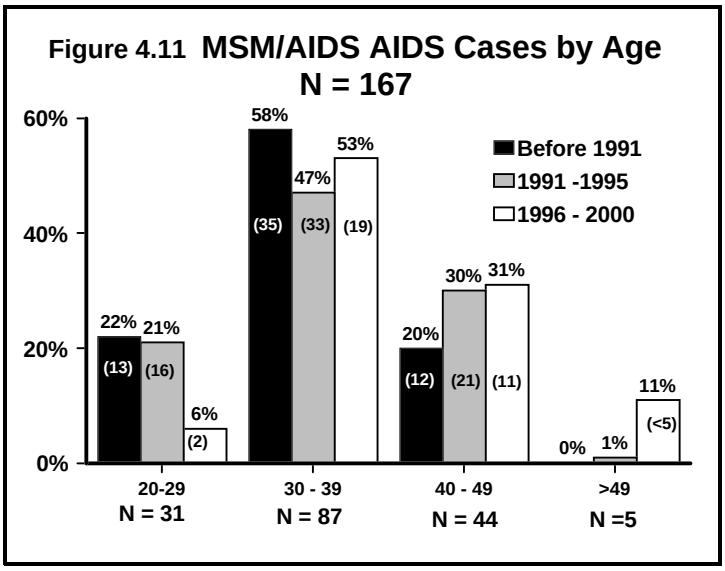


Figure 4.11 shows proportions of MSM/IDU cases in three periods by age. More than half of these cases 52.1% (87) were diagnosed among individuals in their thirties. Most of the cases of MSM/IDU (78.4%) were diagnosed between 30 to 49 years of age. The proportion of cases among MSM/IDU has declined for those in the 20 - 29 age group, and at the same time, a small proportion (11%) has increased among those over 49 years of age (>49) in the last five years.

Most of the MSM/IDU cases were diagnosed in Honolulu county (68.3%, 114 cases) and followed by Hawaiʻi county (16.2%, 27 cases). The proportion of MSM/IDU cases diagnosed in Maui county was 13.8% (23 cases). Only 1.8% (less than four) MSM/IDU cases were diagnosed in Kauaʻi county.

Summary

- Caucasians comprise most of the MSM/IDU AIDS cases (125). However, their number and proportion of cases have been gradually declining over time.
- Asian and Pacific Islanders have been increasing as a proportion of MSM/IDU cases over time.
- 78.4% of the MSM/IDU cases were diagnosed while in their thirties and forties.

Persons at Risk for HIV/AIDS through Heterosexual Contact

Heterosexual contact refers to persons whose only reported risk is heterosexual contact with a partner who is either HIV-infected, or known to be at high risk for HIV infection. Persons considered to be high-risk partners are bisexual men, injection drug users, and recipients of clotting-factor concentrates or HIV-contaminated blood transfusions or tissues.

Figure 4.1 shows there were 5.2% (127) heterosexual contact cases reported in Hawai‘i through December 2000. Among this, 48% (61) of the heterosexually-acquired cases were diagnosed in the last five years. Recent national and local AIDS trends indicate that heterosexual transmission is becoming a more important risk factor. Table 4.7 shows the number and proportion of AIDS cases in Hawai‘i due to heterosexual transmission. The proportion of heterosexual transmission in 1991 - 1995 (4.8%) and in 1996 - 2000 (9.2%) is statistically significant ($p < .05$).

Table 4.7 **Heterosexual and Non-Heterosexual Contact AIDS Cases , 1983-2000**

Risk Factors	**Before 1991**		**1991 - 1995**		**1996-2000**		**Cumulative**	
	No.	%	No.	%	No.	%	No.	%
Heterosexual	10	1.6	56	4.8	61	9.2	127	5.2
Not Heterosexual	620	98.4	240	95.2	605	90.8	2327	94.8
Total	**630**	**1000**	**1,158**	**100**	**666**	**100**	**2,454**	**100**

Table 4.8 **Heterosexual and Non-Heterosexual Contact AIDS Cases by Gender, 1988-1997**

	Male				Female			
Risk Factors	1991-1995		1996-2000		1991-1995		1996-2000	
	No.	%	No.	%	No.	%	No.	%
Heterosexual	19	1.7	18	3.0	37	54.4	43	57.3
Not Heterosexual	1,071	98.3	573	97.0	31	45.6	32	42.7
Total	**1,090**	**100**	**591**	**100**	**68**	**100**	**75**	**100**

Table 4.8 compares the heterosexual contact and non-heterosexual contact AIDS cases for three time periods from 1983 to 2000 for gender. Females have more cases and a greater proportion of the total AIDS cases attributed to heterosexual contact than males. The increase

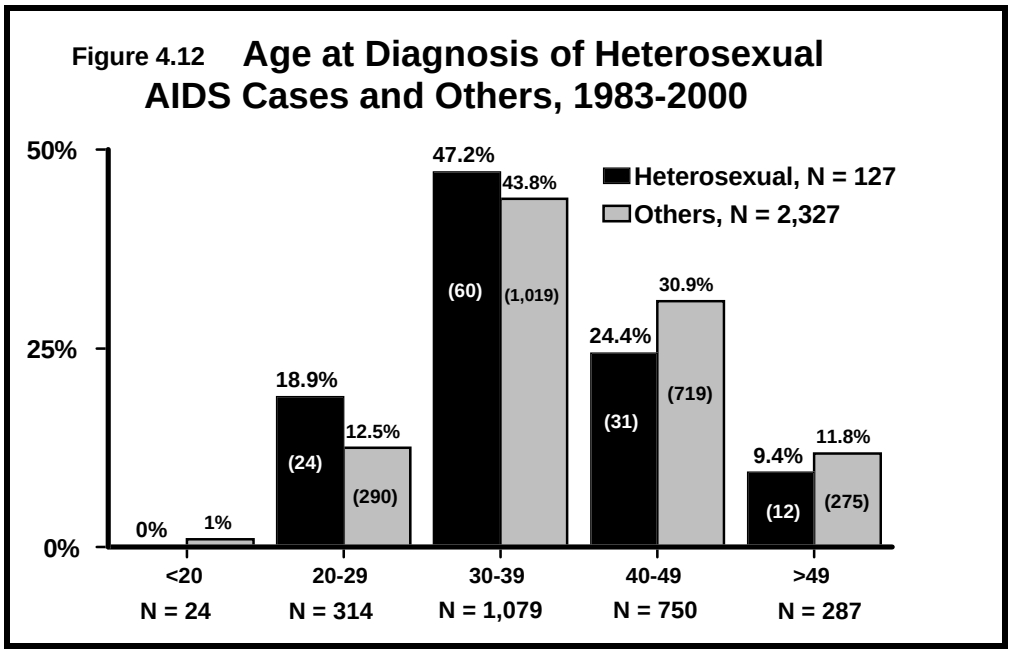
Table 4.9 **Heterosexually Acquired AIDS Cases, 1983 - 2000**						
	Male		Female		Total	
Characteristic	No.	%	No.	%	No.	%
Race/Ethnicity						
Caucasian	21	51.2	34	39.5	55	43.3
Asian and PI	15	36.5	42	48.8	57	44.8
*Hawaian /Pt-Haw**	*6*	*14.6*	*16*	*18.6*	*22*	*17.3*
*Filipinos**	*2*	*4.9*	*11*	*12.8*	*13*	*10.2*
*Other API**	*7*	*17.1*	*15*	*17.4*	*22*	*17.3*
Hispanic	3	7.3	5	5.8	8	6.3
African American	2	4.9	4	4.7	6	4.7
Others	0	0	1	1.2	0	0
Age Group						
20 - 29	6	14.6	18	20.9	24	18.9
30 - 39	22	53.7	38	44.2	60	47.2
40 - 49	7	17.1	24	27.9	31	24.4
> 49	6	14.6	6	7.0	12	9.4
Risk Category of Partner						
Sex with IDU	8	19.5	14	16.3	22	17.3
Sex with bisexual male	1	2.4	16	18.6	16	12.6
Sex with a blood-product recipient	0	0	3	3.5	5	3.9
Sex with HIV+ partner with no specified risk	29	70.7	48	55.8	77	60.6
Mother sex with IDU	2	4.9	3	3.5	5	3.9
Sex with HIV+ partner with no specified risk	1	2.4		1.2	2	1.6
Total	**41**	**100**	**86**	**100**	**127**	**100**

between 1991-1995 and 1996-2000 is significant ($p < .05$). Males have fewer cases and a smaller proportion of the total AIDS cases attributed to heterosexual contact. For males, the change between 1991-1995 and 1996-2000 is not significant ($p > .05$). Heterosexual contact is the largest risk behavior for females in 1996-2000.

By race and ethnicity (Table 4.9), Asian Pacific Islanders (API) comprise 44.8% cases due to heterosexual contact, followed by Caucasians (43.3%) from 1983 to 2000. The number of Caucasian AIDS cases related to heterosexual contact is relatively smaller than other risk behaviors. Among API, Hawaiians and part Hawaiians contain 17.3% of heterosexual cases, followed by Filipinos (10.2%). **A**mong heterosexually acquired AIDS cases, 51.2% of men and 39.5% of women were Caucasians. In contrast, a higher percentage of females compared to males in this category were Asians and Pacific Islanders, including

Hawaiians.

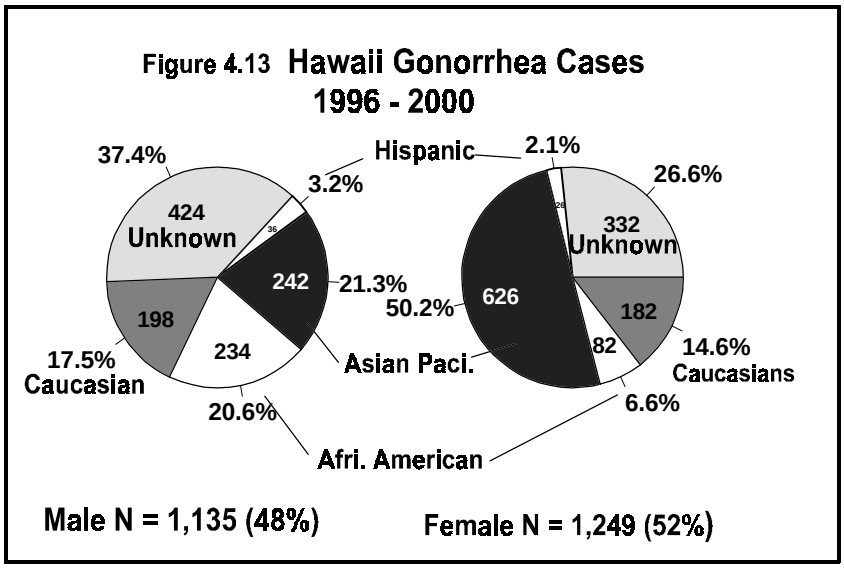
Among heterosexually acquired AIDS cases, infection for 70.7% of men and 55.8% of women may be attributed specifically to sex with an HIV-infected partner (i.e., a partner whose own risk is unknown). It is unknown how many of these 77 cases were unaware of their partner's risk for HIV infection and therefore did not perceive themselves to be at risk. Seventeen percent of heterosexually transmitted AIDS cases involved sex with an IDU. Heterosexual contact with HIV-infected (risk unknown) and IDU partner were the main risk behaviors (77.9%) in heterosexual contact.

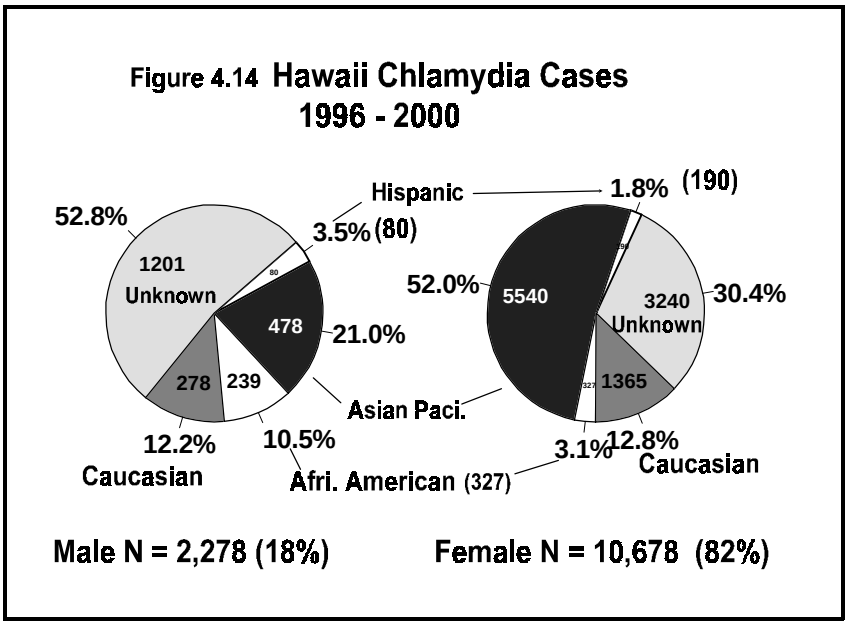


The age differences between heterosexually acquired and all other cases are illustrated in Figure 4.12. Almost half of the heterosexually acquired AIDS cases were diagnosed below the age of 30-39. The proportion of heterosexual AIDS cases diagnosed during 20 - 29 years of age is higher than others. Heterosexual AIDS cases were diagnosed at an earlier age for both men and women, as compared with other modes of transmission.

Sexually Transmitted Diseases

Sexually Transmitted Disease (STDs) data[9] represent unprotected sexual behavior that may lead to HIV infection. Therefore, STD data are an imperfect surrogate marker for HIV risk and can be studied as an indicators of high risk sexual behaviors in the community. The prevention of all bacterial STDs will also have an impact on HIV transmission.





Hawai'i's predominant STDs are gonorrhea and chlamydia (Figures 4.13 and 4.14 respectively). During 1996 - 2000, 52% (1,249) gonorrhea and 82% (10,678) chlamydia cases were among females. For both STDs half of the female cases were among Asian and Pacific Islanders (API) (STD data collected by race, but not ethnicity). For both STDs, the percentage and number of cases for males are less than females (among APIs) cases. Again for male gonorrhea cases, the percentages and numbers were almost the same for API (21.3%) and African American (20.6%). The cases of Chlamydia for Caucasians and African American males are also relatively same. This data should be interpreted with caution, as many African American cases were reported from military sources in Hawai'i. A large number of STD cases are not known for race/ethnicity.

[9]Source: STD/AIDS Prevention Program, Department of Health

Figure 4.15 **Hawaii Gonorrhea Cases by Age 1996 - 2000**

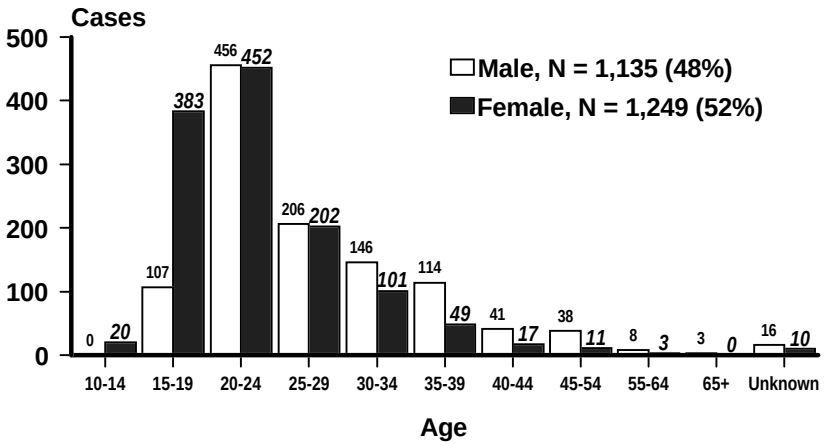


Figure 4.16 **Hawaii Chlamydia Cases by Age 1996 - 2000**

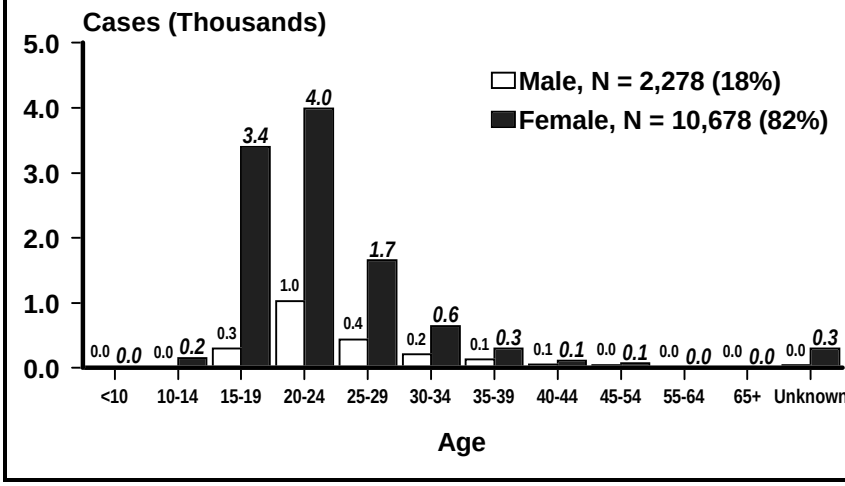


Figure 4.15 and 4.16 show Hawai‘i gonorrhea and chlamydia cases by different age groups. The majority of gonorrhea and chlamydia cases for females occurred in their early twenties and during their teen age years. But for males, the majority of gonorrhea and chlamydia cases were in their early twenties only. More males were infected with gonorrhea during their thirties than females, but more females were infected with chlamydia compared to males during their thirties.

Chlamydia has been a reportable disease in Hawai‘i since May 1990 and has become the most prevalent of all sexually transmitted diseases. This infection can be especially dangerous in women, since it is often asymptomatic, and if left untreated, may progress to pelvic inflammatory disease, ectopic pregnancies, and/or infertility. In addition, infected pregnant women may pass this infection to their babies during delivery. Hawai‘i’s chlamydia screening program has improved surveillance efforts over the past decade. It has also reduced the incidence of new cases by prompt treatment of identified individuals infected with chlamydia.

Summary

- Heterosexual HIV transmission is becoming more common.
- 79.1% of Hawai‘i’s heterosexually transmitted AIDS cases were diagnosed within the last five years.
- For AIDS cases among females, heterosexual contact is the highest risk behavior.
- Asians and Pacific Islanders have a higher proportion of AIDS cases attributed to heterosexual contact than of those attributed to other risk behaviors (such as MSM, IDU).
- Hawaiians/part-Hawaiians and Filipinos have higher proportions of AIDS cases attributed to heterosexual contact than of those attributed to other risk behaviors.
- In 41.8% of heterosexually transmitted AIDS cases, the specific risk factor of the HIV-infected partner has not been identified, and the individuals may not have perceived themselves to be at risk for HIV infection.
- The average age at diagnosis for persons who were infected through heterosexual contact was two years younger than in non-heterosexually-transmitted cases.

HIV/AIDS in Women and Children

From 1983 to December 31, 2000, 160 females with AIDS have been reported in Hawai‘i. From 1996 to 2000, females comprised 11% of Hawai‘i’s cases. The proportion of female AIDS cases has been significantly increasing over time ($p < .05$) and almost doubled between 1991-1995 (5.9%, 68 cases) and 1996-2000 (10.8%, 72 cases).

Figures 4.17 and 4.18 show the race/ethnicity of AIDS cases for both males and females respectively. Each figure shows breakdown of the Asian and Pacific Islanders group for four major ethnic groups, Hawaiian, Filipino, Japanese and Chinese. The other ethnic groups among the API group are combined as Other API. Almost half of the total female AIDS cases are API, with Hawaiians/part-Hawaiians the largest single API group. Hawaiians/part-Hawaiians and Caucasians are over-represented among female AIDS cases in comparison to their proportion of the state population (12.3% for Hawaiian and 33.4% for Caucasian). The proportion of total female cases that is Hawaiians/part-Hawaiians and Filipinos is twice that of male cases.

Table 4.10 shows males and females AIDS cases for race/ethnic groups for three time periods.

Figure 4.17 Male AIDS Cases, 1983 - 2000

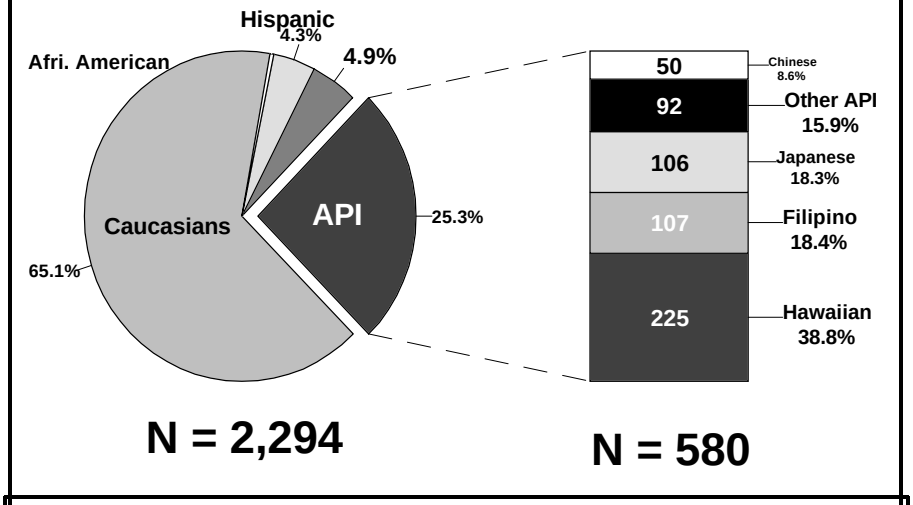


Figure 4.18 Female AIDS Cases, 1983 - 2000

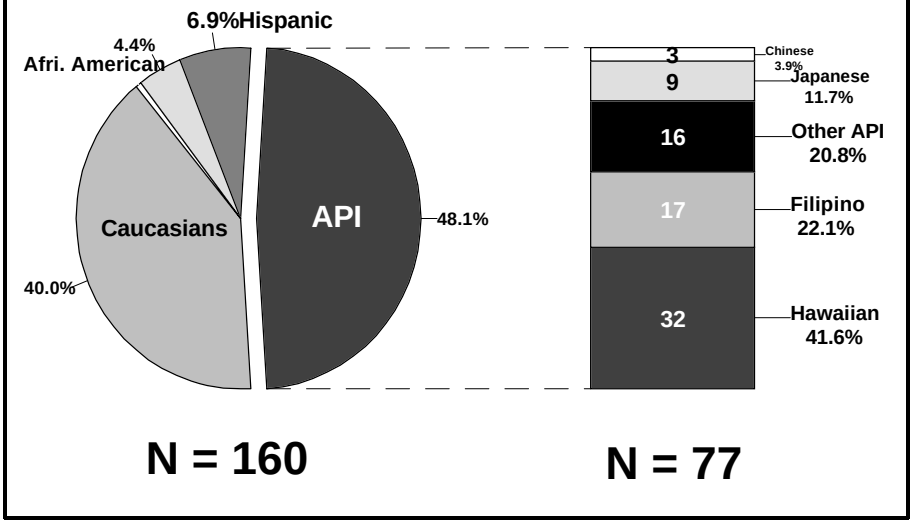


Table 4.10 Male and Female AIDS Cases by Race/Ethnicity								
	Before 1991		**1991-1995**		**1996-2000**		**Total**	
Male	**No.**		**No.**	**%**	**No.**		**No.**	**%**
Caucasian	449	73.6	697	63.9	347	58.4	1,493	65.1
Asian and PI	115	18.9	282	25.8	183	30.8	580	25.2
*Haw./Pt.Haw.**	*50*	*8.2*	*111*		*63*	*10.6*	*224*	*9.8*
*Filipino**	*27*	*4.4*	*44*	*4.0*	*36*	*6.1*	*107*	*4.7*
*Japanese**	*15*	*2.5*	*55*	*5.0*	*36*	*6.1*	*106*	*4.6*
*Chinese**	*7*	*1.1*	*29*	*2.7*	*14*	*2.4*	*50*	*2.2*
*Other/API**	*16*	*2.6*	*43*	*3.9*	*34*	*5.7*	*93*	*4.1*
Hispanic	22	3.6	58	5.3	33	5.6	113	4.9
Afr. American	20	3.3	50	4.6	28	4.7	98	4.9
Others	4	0.7	3	0.3	3	0.5	10	0.4
Subtotal	**610**	**100**	**1,090**	**100**	**594**	**100**	**2,294**	**100**
Female	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Caucasian	10	50.0	29	42.6	25	34.7	64	40.0
Asian and PI	6	30.0	34	50.0	37	51.3	77	48.1
*Haw./Pt.Haw.**	*1*	*5.0*	*15*	*22.1*	*16*	*22.2*	*58*	*36.3*
*Filipino**	*1*	*5.0*	*9*	*13.2*	*7*	*9.7*	*32*	*20.0*
*Japanese**	*3*	*15.0*	*3*	*4.4*	*3*	*4.2*	*17*	*10.6*
*Chinese**	*0*	*0*	*1*	*1.5*	*2*	*2.8*	*9*	*5.6*
*Other/API**	*1*	*5.0*	*6*	*8.8*	*9*	*12.5*	*16*	*10.0*
Hispanic	3	15.0	2	2.9	3	4.2	8	5.0
Afr. American	1	5.0	2	2.9	4	5.6	7	4.4
Others	0	0	1	1.5	3	4.2	4	2.5
Subtotal	20	100	68	100	72	100	160	100

* All groups are shown as percent of total AIDS cases of the same sex.

Over time, the proportion of female cases that are Caucasian has not changed. However, the proportion of female cases that are API has increased, especially for Hawaiians/part Hawaiians. However, these increases are not statistically significant (p> .05).

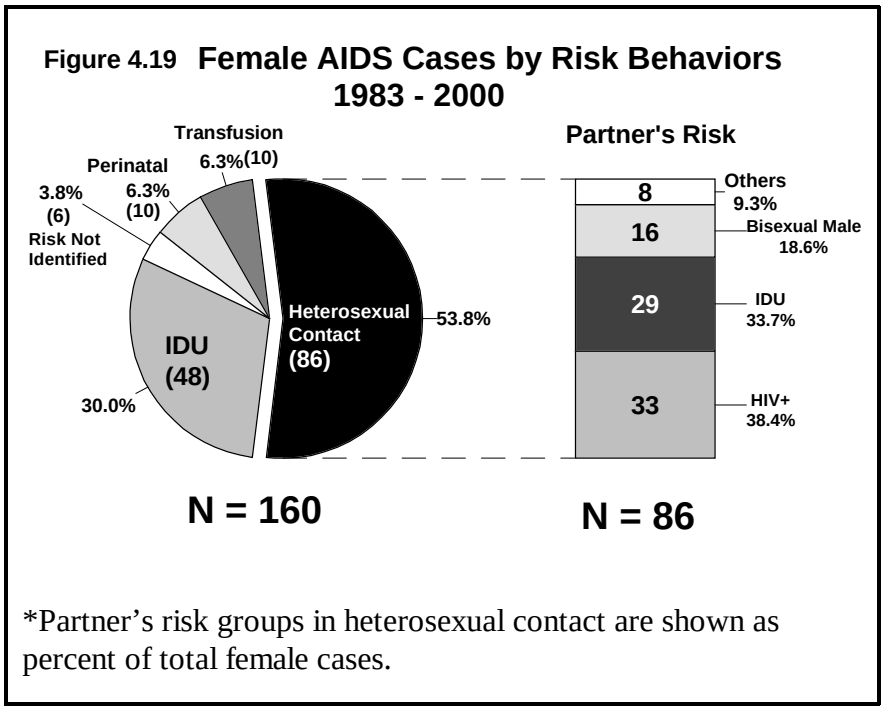
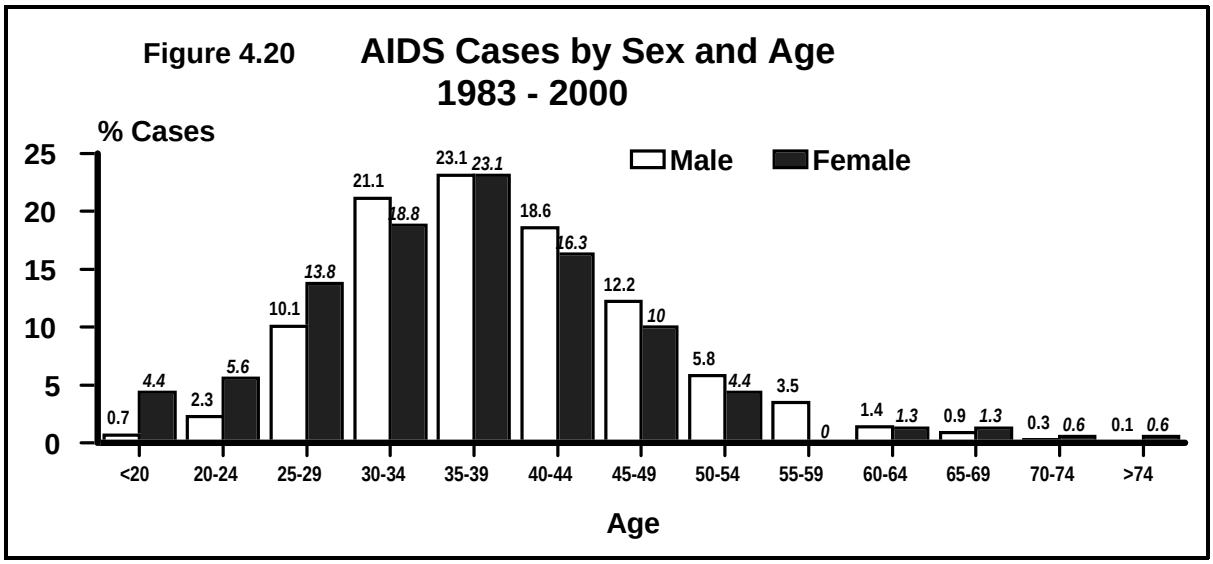


Figure 4.19 illustrates the reported risk behaviors of women with AIDS. For over half of these female cases, the highest risk behavior is heterosexual contact. On the right, figure 4.19 shows the risk of woman's partner. Among this 38.4% of their partners were HIV positive, followed by their partners IDU risk behaviors (33.7%, 29 cases).

The second largest risk factor was the women's own injection drug use (30%, 48 cases). Heterosexual contact and IDU are the major risk factors for females. Figure 4.20 compares the percent distribution of AIDS cases by age for men and women. Among females, 42.5% of the AIDS cases were less than 35 years old when diagnosed, compared to 34.1% for men. Women were diagnosed with AIDS at younger ages than men.



It is important to recognize that the age at diagnosis of AIDS is not the age when HIV infection was acquired. It is likely that many women became infected when they were in their teens and twenties. The number of cases for males is much higher than female cases, but it is customary to analyze data based on percentages. A higher proportion (5.6%) of females were infected during 20-24 years of age compared to males (2.3%).

Hawai‘i has been fortunate to have had very few children diagnosed with AIDS. Of 16 pediatric cases (12 years and younger) diagnosed among Hawai‘i residents from 1986 through 2000, 10 were males (62.5%) and 6 females (37.5 %). Risk for pediatric cases were as follow: 13/16 (81.3%) were attributed to perinatal AIDS cases whereby HIV was transmitted from mother to child either during gestation or while giving birth, pediatric hemophilia 2/16 (12.5%) , and contaminated blood products 1/16 (6.3%). There was a statewide average of one perinatal case a year.

Sexually Transmitted Diseases

STD data represents unprotected sexual behavior which can lead to HIV infection. Table 4.11 details STD cases and rates in females by racial group for 1999 and 2000. Gonorrhea and chlamydia rates for both 1999 and 2000 were highest for African-Americans. However, most African-American cases in Hawai‘i are reported by military facilities. Figures 4.13 and 4.14 show gonorrhea and chlamydia cases respectively for males and females. Females, among API comprise the greatest number of gonorrhea with 50.2% (626), chlamydia with 52.0% (5,540) cases.

Table 4.11 **Female Gonorrhea and Chlamydia Cases by Race**

	Gonorrhea 1999		**Gonorrhea 2000**		**Chlamydia 1999**		**Chlamydia 2000**	
Race	**Cases**	**Rate**	**Cases**	**Rate**	**Cases**	**Rate**	**Cases**	**Rate**
Caucasian	49	13.0	38	10.1	446	113.9	446	118.0
Asian and PI	113	16.1	99	14.1	1,432	190.0	1,273	181.5
Afr.-American	26	93.3	13	46.6	81	240.0	59	211.7
Hispanic	9	10.3	5	5.7	49	60.2	48	55.0
Other/unknown	56	-	79	-	566	-	1,055	-
Total	**253**	**22.7**	**234**	**21.3**	**2,574**	**217.1**	**2,881**	**237.8**

Source :estimated US Census 1999 and US Census 2000 were used to calculate rate.

From 1986 to 2000, 27,461 females were tested for both gonorrhea and chlamydia through the DOH’s gonorrhea/chlamydia screening program annually. Free treatment is provided to all females who test positive for chlamydia. Their partners are prophylactically treated without being

tested. The ratio of female to male chlamydia cases is believed to be similar to the distribution of gonorrhea cases, which is approximately 1:1. However, males are not actively screened for chlamydia, so the available data largely reflect the epidemic in females.

HIV Seroprevalence Survey in Childbearing Women

Estimating HIV infection among women is an important means of assessing the spread of HIV into heterosexual population and infants. Table 4.14 shows the HIV Seroprevalence Survey in Childbearing Women. Screening newborn infants for HIV antibodies measured HIV seroprevalence in mothers delivering live infants. The HIV antibody is passed from an HIV-infected mother to her infant during pregnancy or while giving birth. Thus, finding the HIV antibody in an infant's blood reflects the mother's HIV status, and all infants born to an HIV-infected mother will have an HIV positive antibody test, but not all infants become infected with HIV.

From April 1, 1997 to March 31, 2000, there were 27,425 infants who were tested for HIV antibodies. Of these, only 4 infants were HIV+. Table 4.12 shows the results for this three year study. The prevalence of HIV found in this survey should not be generalized to all women, however, because the data provide information only about women who delivered live-born infants.

Table 4.12 **Results of HIV Neonatal Survey* in Childbearing Women, Hawai'i**

April 1, 1997-June 30, 2000	Live Births	Number of Test	Number of HIV+	Seropositivity Rate
Total	**41,885**	**27,425**	**4**	**14.6/100,000**

*Source: Hawai'i AIDS Education Project

The survey data were collected from four major Hawai'i laboratories and are unlinked to any personal information that would identify the mother or the infant. As a result, we do not know what proportion of women knew of their HIV infection, nor how many of the women infected with HIV had received AZT during their pregnancies.

Civilian Applicants for Military Service Data

From 1985 through 1995, 3,320 women from Hawai'i were screened for HIV when they applied for military service. One of these women was HIV positive**.**

Summary

- The proportion of females among AIDS cases increased from 0.8% in before 1991 to 2.8% in 1991-1995 and remained almost the same with 2.9% in 1996-2000.
- The highest proportion of female AIDS cases are among APIs. Hawaiians/part-Hawaiians, Caucasians, and API were the major racial/ethnic groups reflected in female AIDS cases.
- The proportion of female AIDS cases that are Hawaiians/part-Hawaiians is increased from before 1991 but remained the same for last two periods as total female cases.
- For Hawaiian/part-Hawaiians and Filipinos, each group's proportion of total female cases is twice its proportion of male cases.
- Heterosexual contact and injection drug user are the two major risk behaviors among the female AIDS cases.
- 48.1 % of female AIDS cases are linked to IDU, either IDU or sexual partner of IDU.
- 43% of the women were younger than 35 when diagnosed with AIDS: most of these women were probably infected in their teens and twenties.
- Women were diagnosed with AIDS at a younger age than men.
- From 1997 to 2000, there were 14.6 perinatally-acquired AIDS cases, which is an average of less than one case per year.

HIV/AIDS in Adolescents/Young Adults

Through 2000, there were eight AIDS cases among adolescents (13-19 years old) and 61 cases among young adults (20-24 years old) in Hawai'i. These represent 0.3 % and 2.4 % respectively of total AIDS cases. Three of eight adolescent AIDS cases and 19.6% (12) of the young adult AIDS cases occurred in 1996-2000.

Although the number of adolescents with AIDS is relatively small, it is likely that many young adults who are currently HIV-infected have not yet developed AIDS because the average period of time from HIV infection to the development of AIDS is 10 years. Within the 35 states with HIV reporting, 4% of AIDS cases and 18% of HIV-positive cases (not yet diagnosed with AIDS) were adolescents and young adults age 13-24 at initial diagnosis.[10]

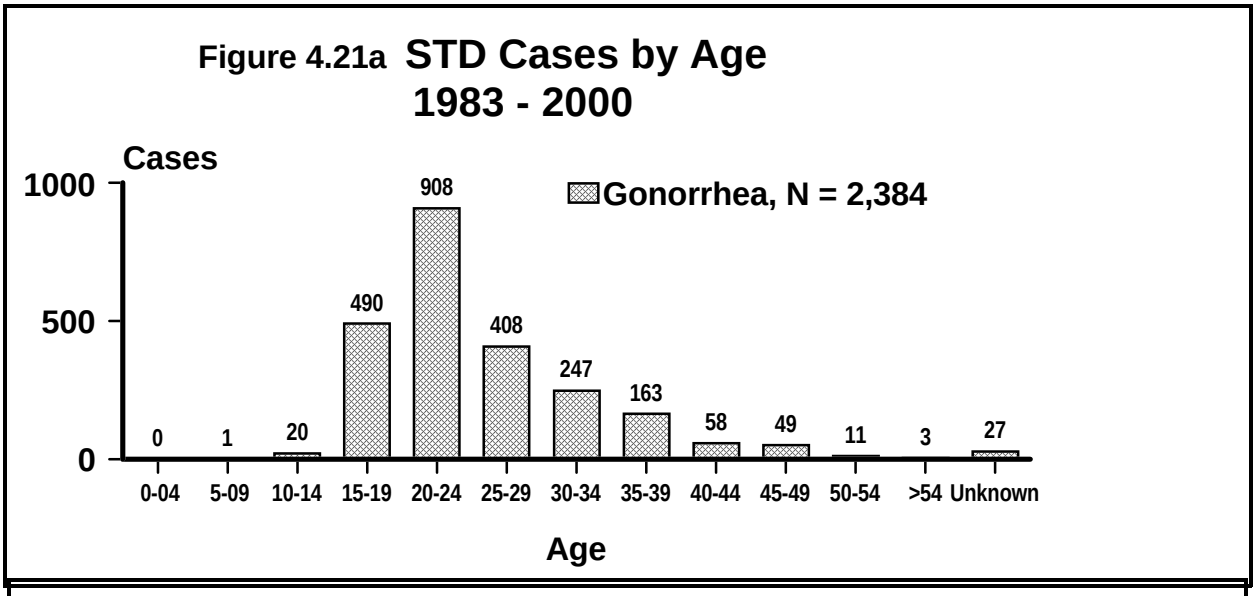
For Hawai'i adolescents, 7 out of 8 cases (87.5%) were Asians and Pacific Islanders and one was Caucasian (12.5%). Three adolescent AIDS cases were MSM and four cases were hemophiliacs.

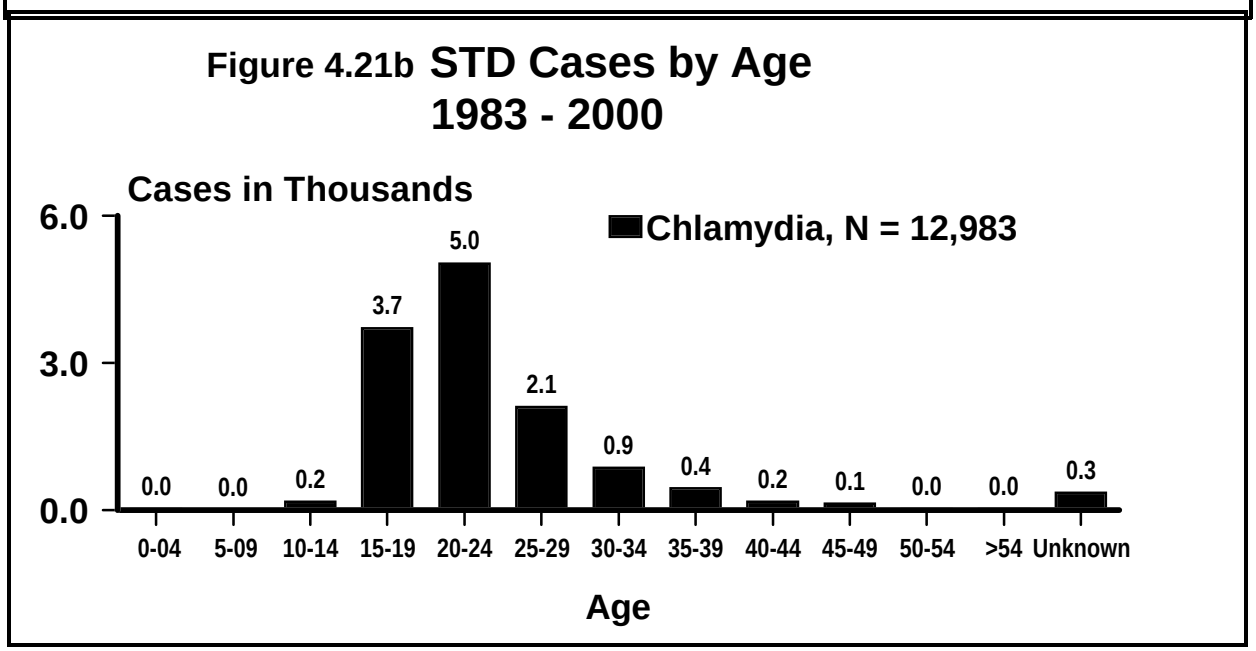
For young adults ages 20-24 with AIDS cases, 45.9% (28) were Caucasian, 11.4% (7) were Hispanic, 36.0% (24) were API, including 14.3% Hawaiian and part-Hawaiian and 7.1% Filipino. There are 52 male cases and six female cases in the 20-24 age group. Most of the young males had been infected with HIV through sex with men (72%, 36). By adding MSM with the MSM/IDU cases, the total percentage will be 78.7% (48). Most of the young females had been exposed to HIV through heterosexual contact 9.8%(6). Injection drug use accounts for 6.6% (4) of combined males and females cases in young adults.

In 1990, Department of Education (DOE) conducted a survey statewide which indicated that two-thirds of the sexually active students in 7th-8th grades had had their first sexual intercourse before the age 13, and 20% of 7th-8th graders and 45% of 9th-12th graders had had sexual intercourse.

STD data for 1996 through 2000, detailing the age of reported cases of chlamydia and gonorrhea, are shown in Figure 4.21 This graph shows that a substantial number and percentage of the cases were among teenagers. This put them at increased risk for HIV transmission

[10] CDC. HIV/AIDS Surveillance Report, Table 7. AIDS cases by sex, age at diagnosis, and race/ethnicity, reported through June 2000, United States. Table 8. HIV infection cases by sex, age at diagnosis, and race/ethnicity, reported through June 2000, from the 36 areas with confidential HIV infection reporting. Midyear Edition, Vol 12, No 1, p 14-15. ***website: www.cdc.gov/hiv/stas/harslink.htm.***





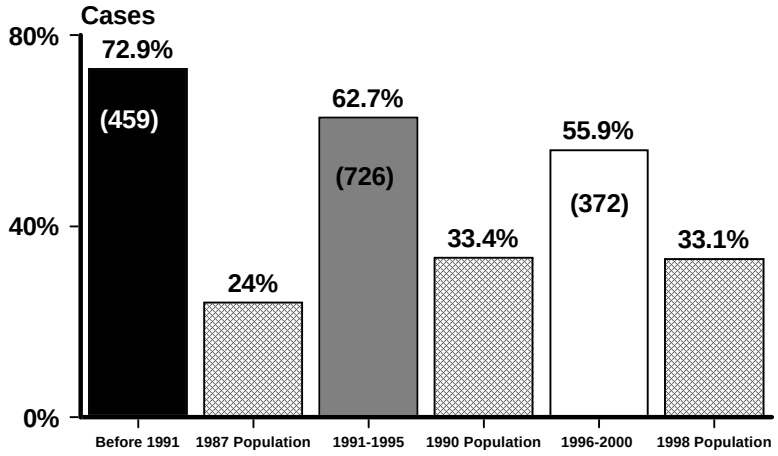
Summary

- All adolescent AIDS cases (6) are among the API group and almost all are from the most recent five years.
- MSM and hemophilia were the highest risk factor for adolescents. MSM is the highest risk factor for young adult.
- Young women had a higher proportion of AIDS cases attributed to heterosexual contact than young men.

HIV/AIDS in Caucasians

Caucasians account for 63.4 % (1,557) of the total AIDS cases reported through 2000. Caucasians comprised the largest number and proportion of AIDS cases in Hawai'i. Figure 4.22 illustrates the numbers and percentages of Caucasian cases for three time periods. The proportion of newly reported persons with AIDS who are Caucasian has significantly decreased in the past years ($p < .05$). However, the AIDS cases among Caucasians increased from 459 cases before 1991 to 726 in 1991-1995. The number and proportion of cases for Caucasians has decreased in the recent five year period (1996-2000) to 55.9% (372).

Figure 4.22 Caucasian AIDS Cases and Caucasian Population*, 1983 - 2000, N = 1,557



*Source: Population data from estimated US census for 1987 and 1998 , and US census for 1990 population.

Table 4.13 details AIDS cases among Caucasians by risk behaviors over time. The risk behaviors of Caucasians were similar to those of all persons with AIDS in Hawai'i.

Table 4.13 **Caucasian AIDS Cases by Risk Behaviors, 1983-2000**

Risk Behaviors	Before 1991		1991-1995		1996-2000		Total	
	No.	%	No.	%	No.	%	No.	%
MSM	376	81.9	579	79.8	273	73.4	1,228	78.9
IDU	16	3.5	47	6.5	27	7.3	90	5.8
MSM/IDU	50	10.9	50	6.9	25	6.7	125	8.0
Heterosexual	3	0.7	33	4.5	19	5.1	55	3.5
Others Modes	14	3.1	17	2.3	28	7.5	59	3.8
Total	**459**	**100.0**	**726**	**100.0**	**372**	**100.0**	**1,557**	**100.0**

Through 2000, there were 1,493 male and 64 female Caucasian AIDS cases. Table 4.10 shows that the number and proportion of Caucasian male AIDS cases has declined from 73.6% (449) in before 1991 to 58.4% (347) in 1996-2000. The proportion of Caucasian female AIDS cases has also declined from 50% before 1991 to 34.7% in 1996-2000. The number of cases for female has increased from 10 to 25 during the same time period.

Most of the Caucasian AIDS cases (1,187, 76.2%) were diagnosed while in their thirties and forties.

For 1996-2000, residence at diagnosis of AIDS among Caucasian individuals is shown in Table 4.14. The proportion of Caucasian AIDS cases was highest in Hawai‘i and Maui Counties.

Table 4.14 **Caucasian AIDS Cases by County 1996-2000**

	AIDS cases		1998* Population	
County	No.	%	No.	%
Honolulu	242	66.3	165,398	65.8
Hawai‘i	49	14.9	36,100	14.4
Maui	55	14.1	35,918	14.3
Kaua‘i	26	4.7	14,038	5.6
Total	372	100	251,454	100.0

*1998 (mid year of 1996-2000) estimated U.S. Census figures were used. Source: The State of Hawai‘i Data Book 1999, http://www.Hawai‘i.goov/dbedt/

Summary

- Caucasians comprised the largest number and proportion of AIDS cases in Hawai‘i.
- The number and proportion of AIDS cases among Caucasians has decreased from 1991-1995 to 1996-2000.
- In the past 10 years, the proportion of males and females Caucasian AIDS cases has declined.
- The proportion of Caucasian AIDS cases is slightly higher in Hawai‘i and Maui Counties.

HIV/AIDS in Asian and Pacific Islanders Ethnic Groups

Figure 4.23 illustrates AIDS cases for different race/ethnic groups. Asian Pacific Islanders comprised 26.8 % (657) of AIDS cases through December 2000. The largest number of AIDS cases among the API group is among Hawaiians (10.5%, 257) and followed by Filipino (5.1%, 124). Table 4.15 provides detail of AIDS cases and state population for Asians and Pacific Islanders (API). The API are 64.9 % of the state's population and comprise 26.8 % of the diagnosed AIDS cases as of December 2000. Thus, Asian and Pacific Islanders are under-represented in the state's AIDS epidemic. However, the proportion of AIDS cases that are API are significantly increasing over time ($p < .05$), but the number of AIDS cases for APIs group has decreased recently (1996-2000). Table 4.16 shows that the proportion of AIDS cases for Hawaiians has significantly increased over time, but the number of AIDS cases for Hawaiians has decreased in recently. The proportions of total

Figure 4.23 AIDS Cases by Race/Ethnicity 1983 - 2000

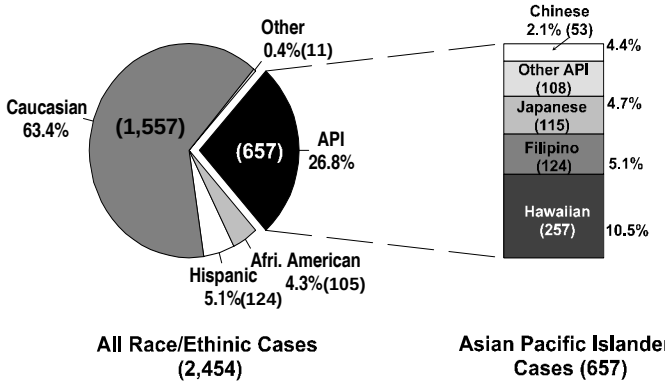


Table 4.15 **AIDS Cases by Race/Ethnicity, 1996-2000**

Race/Ethnicity	Total		Before 1991		1991-1995		1996-2000		State Population* 1998 and 1990	
	No.	%	No.	%	No.	%	No.	%	No.	%
Caucasian	1,557	63.4	459	72.9	726	62.7	372	55.9	251,453	23.8
Asian and PI	657	26.8	121	19.2	316	27.3	220	33.0	685236	64.9
Afr. American	105	4.3	21	3.3	52	4.5	32	4.8	17,310	1.6
Others	11	0.4	4	0.6	4	0.3	3	0.5	21,083	2.0
Hispanic	124	5.1	25	4.0	60	5.2	39	5.9	81,390	7.7
All Races	**2,454**	**100**	**630**	**100**	**1,158**	**100**	**666**	**100**	**1,056,472**	**100**

* Persons of Hispanic origin 81,390m(7.3%) can be of any race. Population figures for Caucasians and African Americans are from 1998 estimated US Census. Asian and Pacific Islanders and other races population figures were from 1990 US Census.

AIDS cases that are Japanese, Filipino and Chinese are less than half of each group's proportion of the state population. The proportion of total AIDS cases that are Hawaiians and Part Hawaiians is closer to their proportion of the state population. However, the proportion of AIDS cases in each API subgroup is increasing over time, although each group is under-represented in the epidemic compared to its proportion of the state population.

The API proportion of MSM AIDS cases, IDU AIDS cases and MSM/IDU AIDS cases is increasing over time, as shown in Figure 4.2a, 4.2b, and Table 4.1, for MSM; Figure 4.5, Table 4.3 for IDU; Table 4.6 for MSM/IDU. The number of API AIDS cases for MSM, IDU, and MSM/IDU for 1996-2000 is less than in 1991-1995.

The proportion and number of AIDS cases that are API is higher for heterosexual contact (44.8%, 57) than for other transmission.

API account for 48.1% (77) of the total female cases, more than any other racial/ethnic group, as shown in Figure 4.18 and Table 4.10.

Table 4.16 **Asian and Pacific Islander AIDS Cases, 1983-2000**

Race/Ethnicity *	Total		Before 1991		1991-1995		1993-1997		State Population 1990	
	No.	%	No	%	No.	%	No.	%	No.	%
Japanese	115	4.7	18	2.9	58	5.0	39	5.9	247,486	22.3
Filipino	124	5.1	28	4.4	53	4.6	43	6.5	168,682	15.2
Hawaiian	257	10.5	51	8.1	127	11.0	79	11.9	138,742	12.5
Chinese	53	2.2	7	1.1	30	2.6	16	2.4	68,804	6.2
Others**	108	4.4	17	2.7	48	4.1	43	6.5	61,522	5.6
Total Asian/PI	**657**	**26.8**	**121**	**19.2**	**316**	**27.3**	**220**	**33.0**	**685,236**	**61.8**

* All cells are shown as percent of total state data.

**Others: Includes cases in mixed non-Hawaiians, Koreans, Samoans, Guamanians, Marshallese, Micronesians, Palauans, other Pacific Islanders, Vietnamese, and Laotians. The numbers of AIDS cases in each of these API group are so small (<5) that they have to be summed together.

Summary

- Asians and Pacific Islanders have the second highest numbers and percentage of AIDS cases.
- The proportion of AIDS cases in each API group are increasing over time.

- The proportion of API within MSM AIDS cases, IDU AIDS cases and MSM/IDU AIDS cases is increasing over time.

- Asians and Pacific Islanders have a higher proportion of AIDS cases attributed to heterosexual contact than any other racial/ethnic group.

- APIs have more female cases than any other racial or ethnic group.

HIV/AIDS in Hawaiian/Part-Hawaiian

Hawaiian/Part-Hawaiian have had 10.7 % (254) of the diagnosed AIDS cases as of December 31,2000. Aside from total number of cases API which is second, Hawaiians/Part-Hawaiians have the third largest proportion and numbers of AIDS cases in Hawai'i.

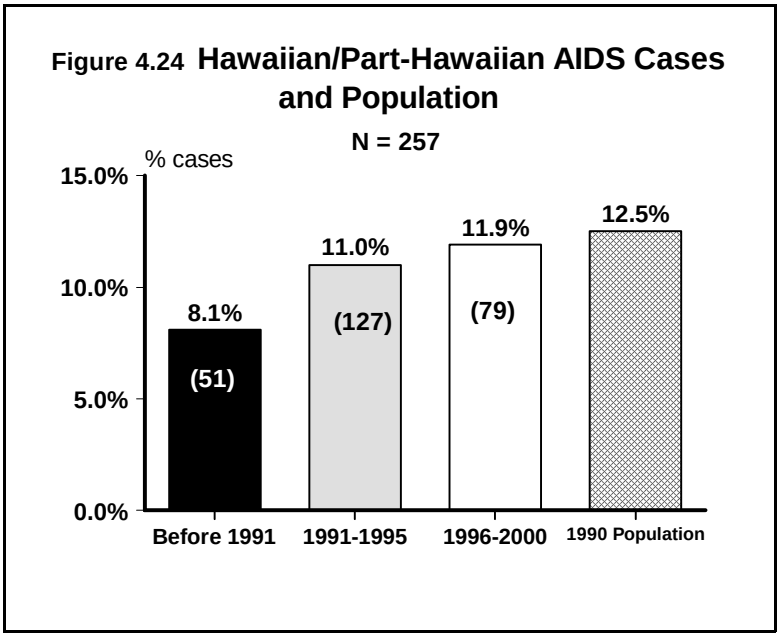


Figure 4.24 shows the proportion of AIDS cases that are Hawaiian/Part-Hawaiian has increased over time, but the number has decreased from 127 in 1991-1995 to 79 recently (1996-2000). The proportion of AIDS case for Hawaiians was significant ($p < .05$). Almost half of the AIDS cases in this group was diagnosed during 1991-1995 but decreased in recent years. This decrease of number may be due to the recent drug therapies for HIV infection.

Table 4.10 details AIDS cases among Hawaiians/Part-Hawaiians by gender over time. The proportion of cases for Hawaiian/Part-Hawaiian males is increasing over time from 8.2% (50 cases) before 1991, to 10.2% (111 cases) in 1991-1995 and 10.6% (63 cases) for 1999-2000. The difference across periods is not significant ($p > .05$). The proportion of cases for Hawaiian/Part-Hawaiian females increased from 5.0% (1 cases) before 1991 to 22.1% (15 cases) during 1991-1995 and remained almost same with 22.2% (16 cases) in 1996-2000. The increase was not significant ($p > .0\ 5$). Further, Hawaiians/Part-Hawaiians have a higher proportion of female cases than any other racial/ethnic group except Caucasians.

Table 4.17 **Hawaiian and Part-Hawaiian AIDS Cases by Risk Behaviors, 1983-1997**						
Risk Behaviors	Before 1991		1991-1995		1996-2000	
	No.	%	No.	%	No.	%
MSM	43	84.3	96	75.6	50	63.3
IDU	4	7.8	11	8.7	5	6.3
MSM/IDU	1	2.0	5	3.9	4	5.1
Heterosexual	2	3.9	8	6.3	12	15.2
Other modes	1	2.0	7	5.5	8	10.1
Total	**51**	**100**	**127**	**100**	**79**	**100**

Table 4.17 shows AIDS cases among Hawaiian/Part-Hawaiian by risk behaviors over time. The proportion of total Hawaiian and Part-Hawaiian AIDS cases attributed to MSM has significantly decreased ($p < .05$) from 75.6% in 1991-1995 to 63.3% recently (1996-2000). At the same time, the number and proportion of AIDS cases related to heterosexual risk behavior has increased significantly for Hawaiians/Part-Hawaiians. AIDS cases among Hawaiians/Part-Hawaiians comprise 17.3% of the total heterosexual contact AIDS cases.

Figure 4.25 Male Hawaiian/Pt.- Hawaiian AIDS Cases by Risk, N = 225

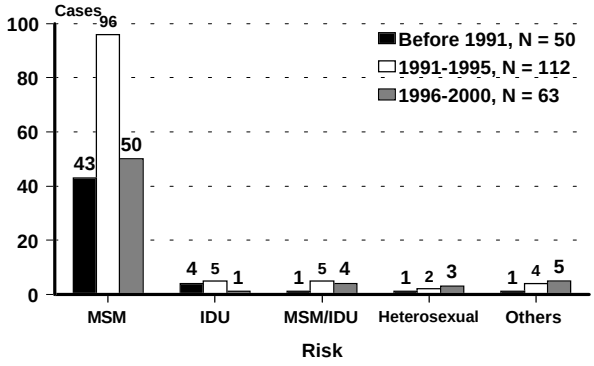


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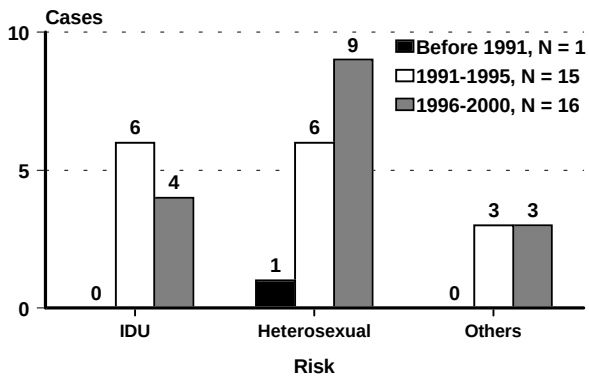
Figure 4.26 Female Hawaiian/Pt.- Hawaiian and Non-Hawaiian AIDS Cases by Risk, N = 32



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The number of AIDS cases for three time periods by males and females comparing risk factor are illustrated in Figure 4.25 and 4.26 respectively. For male Hawaiians/Part-Hawaiians, the major risk behavior is MSM. The number and proportion of MSM cases has decreased recently (1996-2000). The major risk behavior for female Hawaiians/Part-Hawaiians is heterosexual. Both number and proportion of heterosexual AIDS cases for female has increased over time. The number and proportion of cases for IDUs has decreased for both male and female Hawaiians/Part-Hawaiians.

Table 4.18 **Hawaiian/Part-Hawaiian and non-Hawaiians AIDS Cases by Age for Two Periods**

Age Group	Hawaiians/Pt Hawaiians				Non-Hawaiians			
	1991-1995		1996-2000		1991-1995		1996-2000	
	No.	%	No.	%	No.	%	No.	%
< 30	30	23.6	12	15.2	126	12.2	52	8.9
30-34	31	24.4	19	24.1	211	20.5	107	18.2
35-39	31	24.4	19	24.1	240	23.3	140	23.9
40-44	14	11.0	14	17.7	207	20.1	118	20.1
45-49	8	6.3	5	6.3	121	11.7	91	15.5
> 49	13	10.2	10	12.7	126	12.2	79	13.5
Total	**127**	**100**	**79**	**100**	**1,031**	**100**	**587**	**100**

* There were 51 cases for Hawaiian/Part-Hawaiian in the before 1991 period.

Table 4.18 compares the age distribution of AIDS cases in Hawaiians/Part-Hawaiians with that of non-Hawaiians. A higher percentage of AIDS cases are seen in Hawaiian/Part-Hawaiian in the younger adult age groups than are seen in non-Hawaiians. Figure 4.25 and 4.26 illustrate AIDS cases for Hawaiians/Part-Hawaiians and Non-Hawaiians for two last fiver year periods respectively. Over the last 10 years, AIDS cases for those aged 30-40 years of age remained the same for Hawaiian/Part Hawaiian. During 1996-2000, the percentage and number of AIDS cases for those under 30 years of age has decreased. It has increased for the 40-44 age group.

Table 4.19 **Hawaiian/Part-Hawaiian AIDS Cases and Population by County**

County	AIDS Cases				Haw./Pt Haw. Population 1990	
	1991-1995		1996-2000			
	No.	%	No.	%	No.	%
Honolulu	98	77.2	55	69.6	132,332	65.5
Hawai‘i	20	15.7	13	16.5	33,618	16.4
Maui	7	5.5	10	12.7	12,896	12.8
Kaua‘i	2	1.6	1	1.3	26,232	6.3
Total	**127**	**100**	**79**	**100.0**	**205,078**	**100**

Most Hawaiian/Part-Hawaiian AIDS cases were among residents on O‘ahu (Table 4.19). Honolulu County has a higher proportion of Hawaiian/Part-Hawaiian AIDS cases for 1996-2000, compared to their proportion of the Hawaiian/Part-Hawaiian population. Over time, Hawai‘i and Mau‘i Counties have increased their proportion of Hawaiian and Part-Hawaiians AIDS cases, and Honolulu and Kaua‘i counties have decreased their proportion of AIDS cases for Hawaiian/Part-Hawaiian.

Summary

- Hawaiian/Part-Hawaiian have the third largest number of total AIDS cases (257). (Total API AIDS cases are second.)
- Almost half of Hawaiian and Part-Hawaiian AIDS cases were diagnosed during 1991-1995.
- The number of cases for Hawaiians/Part-Hawaiians has decreased in 1996-2000.
- Hawaiians/Part-Hawaiians are over-represented among female AIDS cases in comparison to their proportion of the state population.
- MSM has been the most common risk factor among Hawaiians, even though the proportion of Hawaiian and Part-Hawaiian AIDS cases due to this risk factor has beeb decreasing significantly over time.
- Among Hawaiian women, the proportion of AIDS cases due to IDU and heterosexual contact with an IDU is greater than it is for non-Hawaiian women.
- Hawaiians/Part-Hawaiians comprise 17.3% of heterosexual AIDS cases.
- A larger percentage of Hawaiians/Part-Hawaiians compared with non-Hawaiians were diagnosed before the age of 30.
- Most Hawaiian/Part-Hawaiian AIDS cases were reported in Honolulu county.

HIV/AIDS in Filipinos

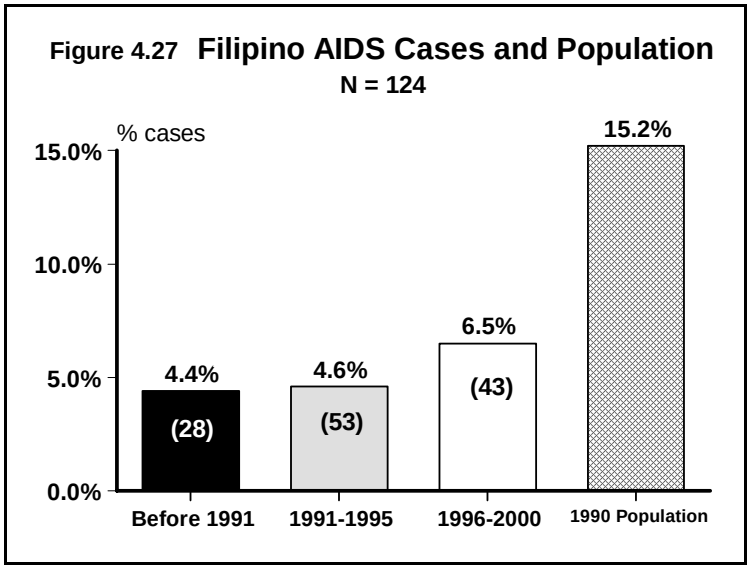


Table 4.20 **Filipino AIDS Cases, 1983-2000**

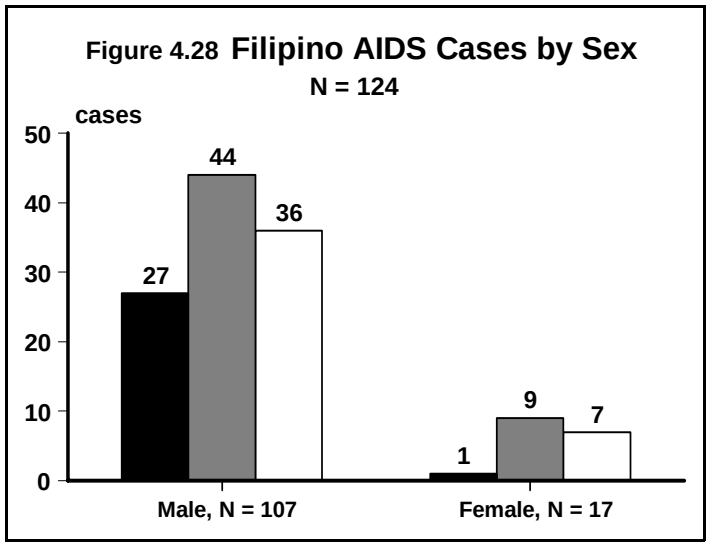
Characteristics	Before		1991-1995		1996-2000	
Risk Behaviors	No.	%	No	%	No	%
MSM	25	89.3	35	66.0	30	69.8
IDU	0	0.0	4	7.5	3	7.0
MSM/IDU	0	0.0	3	5.7	1	2.3
Heterosexual	2	7.1	7	13.2	4	9.3
Other modes	1	3.6	4	7.5	5	11.6
Age						
<30	8	28.6	9	17.0	8	18.6
30-34	5	17.9	15	28.3	6	14.0
35-39	5	17.9	10	18.9	12	27.9
40-44	5	17.9	10	18.9	8	18.6
45-49	3	10.7	1	1.9	3	7.0
> 49	2	7.1	8	6	6	14.0
TOTAL	**28**	**100**	**53**	**100**	**43**	**100**

Filipinos have the fourth highest proportion and number of AIDS cases in Hawai'i. Filipinos are 15.2 % of the state's population and have had 5.0 % (124) of the diagnosed AIDS cases as of December 2000. Thus, Filipinos are substantially under-represented among Hawai'i's AIDS cases.

The proportions of Filipino AIDS cases over time are shown in Figure 4.27. The proportion of Filipino AIDS cases increased from 4.6% in 1991-1995 to 6.5% in 1996-2000, but the number of cases decreased from 53 to 43 for the same time periods.

Table 4.20 shows characteristics of AIDS cases among Filipinos. The proportion of each risk behavior for Filipinos during 1996-2000 is similar to the state HIV/AIDS case data. As of December 2000, Filipino heterosexual contact is higher (10.5%, 13 cases), compared to non-Filipino AIDS cases (4.8%, 114) , and MSM is lower (3.2%, 4) compared to non-Filipinos cases (75.9%, 1,862).

Figure 4.28 illustrates cases among Filipinos by gender. The proportion and number of Filipino male and female cases that has decreased in 1996-2000.



The proportion of females cases among all Filipino cases is 5.6% (7/124) for 1996-2000. The proportion of total Filipino female cases is twice that of male cases. Compared to the total AIDS cases for the state (5.8%, 143 female cases), Filipinos (13.7%, 17 female cases) have a greater proportion of cases that are female. The proportion of Filipino AIDS cases diagnosed before the age of 35 decreased in 1996-2000 (32.6%) from 1988-1992 (45.3%). Recent AIDS cases for Filipinos are being diagnosed at an older age than those in the earlier period.

Table 4.21 **Filipino AIDS Cases by County**

County	AIDS Cases				Filipinos Population 1992*	
	1991-1995		1996-2000			
	No.	%	No.	%	No.	%
Honolulu	38	86.4	33	91.7	82,785	69.4
Hawai‘i	4	9.1	<4	5.6	12,773	10.7
Maui	<4	4.5	<4	2.8	14,683	12.3
Kaua‘i	0	0	<4	0	9,014	7.6
Total	**44**	**100**	**36**	**100**	**119,255**	**100**

*Estimated US Census

Most of the Filipino AIDS cases in 1996-2000 (91.6%, 33 of 36 cases statewide) were among residents of O‘ahu. Table 4.21 shows Filipino AIDS cases by county.

Summary

- The proportion of AIDS cases among Filipinos is lower than their proportion of the state population**.**
- The proportion of AIDS cases among Filipinos are increasing over time but the number has decreased in recent time.
- The proportion of Filipino AIDS cases (10.4%, 13) attributed to heterosexual contact is higher than the proportion of this risk factor for other racial/ethnic groups.
- The Filipinos proportion of total Filipino female cases (8.1%, 13) is twice that of Filipino that of males (4.7%, 107).
- AIDS cases among Filipinos were being diagnosed at older ages in 1996-2000 than those in the earlier time periods.
- Most Filipino AIDS cases (91.6%) were residents of O‘ahu at the time of their diagnosis during 1996-2000.

HIV/AIDS in Hispanics

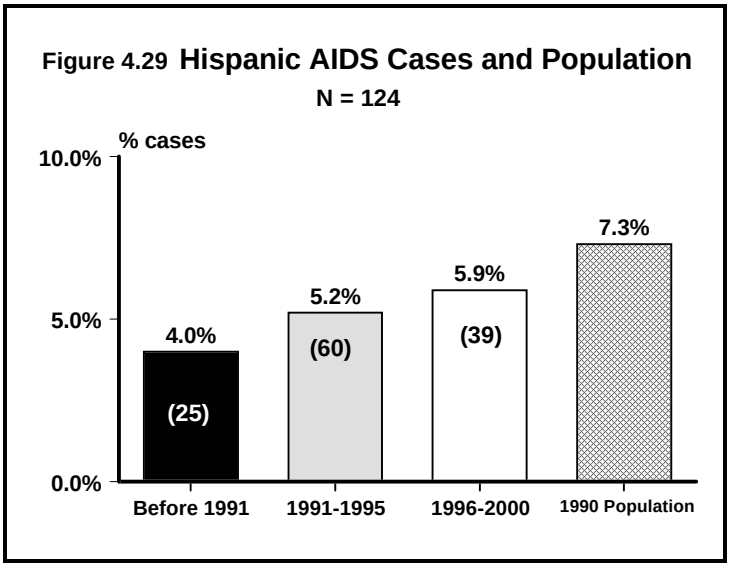


Table 4.22 **Hispanic AIDS Cases by Risk Behavior 1983-2000, N = 124**

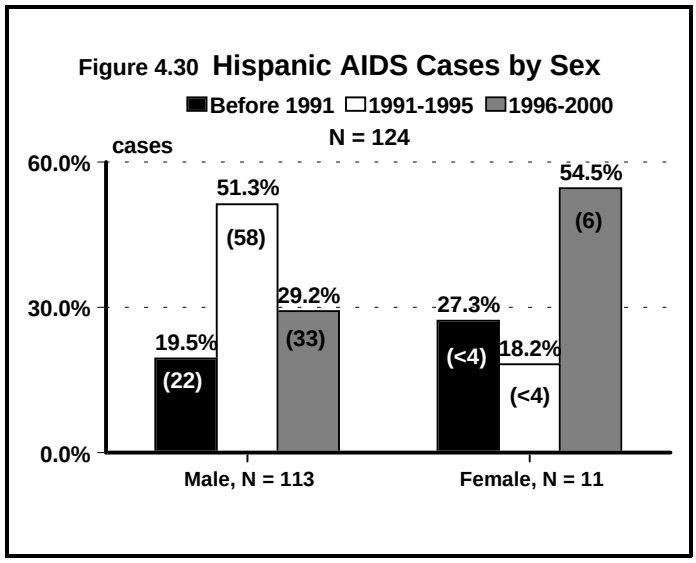
Risk Factor	Before 1991		1991 -1995		1996 -2000	
	No.	%	No.	%	No.	%
MSM	16	64.0	48	80.0	23	59.0
IDU	4	16.0	9	15.0	6	15.4
MSM/IDU	3	12.0	2	3.3	1	2.6
Heterosexual	1	4.0	0	0	6	15.4
Other modes	1	4.0	1	1.7	3	7.7
Age						
<30	5	20.0	14	23.3	3	7.7
30-34	7	28.0	12	20.0	11	28.2
35-39	8	32.0	18	30.0	10	25.6
40-44	4	16.0	8	13.3	7	17.9
45-49	<4	4.0	5	8.3	6	15.4
>49	0	0	3	5.0	2	5.1
Total	**25**	**100**	**60**	**100**	**39**	**100**

There were 124 cumulative Hispanic AIDS cases reported through December 2000. People of Hispanic origin make up 5% of AIDS cases and 7.3% of the state population in Hawai'i. Hispanics are under-represented among AIDS cases. Figure 4.29 shows that the number and proportion of AIDS cases among Hispanics has been decreasing during 1996-2000. The proportion of Hispanic AIDS cases has increased overtime, but the number of cases for Hispanics has decreased in recent five year period.

The number and percentage of Hispanic male AIDS cases among total males has remained the same, (5.3% in 1991-1995 to 5.5% in 1996-2000). The number and percentage of Hispanic female AIDS cases among total female cases has increased from 2.9%(2/68) in 1991-1995 to 15.2% (6/72) in 1996-2000.

Table 4.22 shows the risk behaviors of AIDS cases among Hispanics. The proportion of Hispanic AIDS cases due to MSM, IDU, and MSM/IDU is decreasing. At the same time, the proportion of Hispanic AIDS cases related to heterosexual contact has increased from 0% in 1991-1995 to 15.4% (6 cases) in 1996-2000.

The gender make-up of Hispanic AIDS cases is 91.1% (113) male and 8.9% (11) female. The number and percentage of male cases has decreased, but the number and



percentage for female cases has increased in over the past five years. The proportion of Hispanic AIDS cases under the age of 30 (17.7%) differs from the state AIDS cases (12.8%). Age at diagnosis in Hispanics has been younger than that of all of Hawai‘i AIDS cases.

The percent distribution of Hispanic AIDS cases by county is shown in Table 4.23. Most of the Hispanics AIDS cases were reported in Oahu county. The number and proportion of reported Hispanics AIDS cases has increased in Maui county over time, (3.4% <4 cases in 1991-1995 to 24.4% 10 cases in 1993-1997.

Table 4.23 **Hispanic AIDS Cases by County**

County	Before 1991		1991-1995		1996-2000	
	No.	%	No.	%	No.	%
Honolulu	23	92.0	41	70.7	28	68.3
Hawai‘i	<4	8.0	11	19.0	<4	7.3
Maui	0	0	4	6.9	10	24.4
Kaua‘i	0	0	<4	3.4	0	0

Summary

- The proportion of AIDS cases among Hispanics has increased over time, but the number of cases has decreased in the past five years.
- The proportion of Hispanic AIDS cases due to MSM, IDU, and MSM/IDU are decreasing.
- The proportion of Hispanic AIDS cases due to heterosexual has increased 0% to 15.4% in recent five year period.
- Diagnosis of AIDS in Hispanic has been occurring at younger ages compared to AIDS cases diagnosed among the state as a whole.
- The proportion of Hispanic AIDS cases has been increasing in Maui County in the past five years.

Note: Persons of Hispanic origin can be of any race. From 1990 U.S. Census, total included 21,972 whites, 1,279 African-Americans, 1,098 American Indians, Eskimos, and Aleuts, 38,832 Asians and Pacific Islanders, and 18,209 persons of other race. Use caution when comparing Hispanic proportion of AIDS cases with state population because they are determined by different procedure.

HIV/AIDS in African Americans

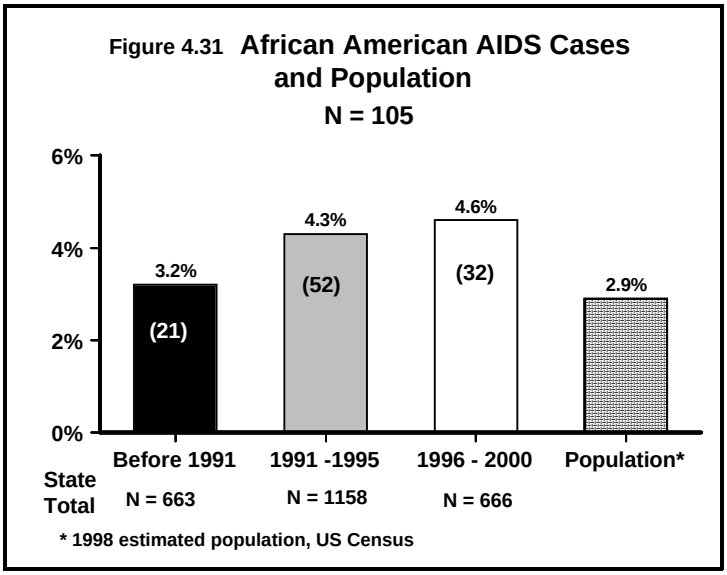


Table 4.24 **African American AIDS Cases by Risk Behaviors 1983-2000, N = 105**

Risk Factor	Before 1991		1991 -1995		1996 -2000	
	No.	%	No.	%	No.	%
MSM	14	66.7	34	65.4	15	46.9
IDU	<4	9.5	7	13.5	6	18.8
MSM/IDU	4	19.0	6	11.5	<4	3.1
Heterosexual	<4	4.8	<5	1.9	5	15.6
Other modes	0	0	4	7.7	5	15.6
Age						
<30	6	28.6	4	7.7	3	6.3
30-34	4	19.0	12	23.1	11	18.8
35-39	5	23.8	14	26.9	10	15.6
40-44	<4	9.5	14	26.9	7	31.3
45-49	<4	9.5	7	13.5	6	9.4
>49	<4	9.5	<4	1.9	2	18.8
Total	**21**	**100**	**52**	**100**	**32**	**100**

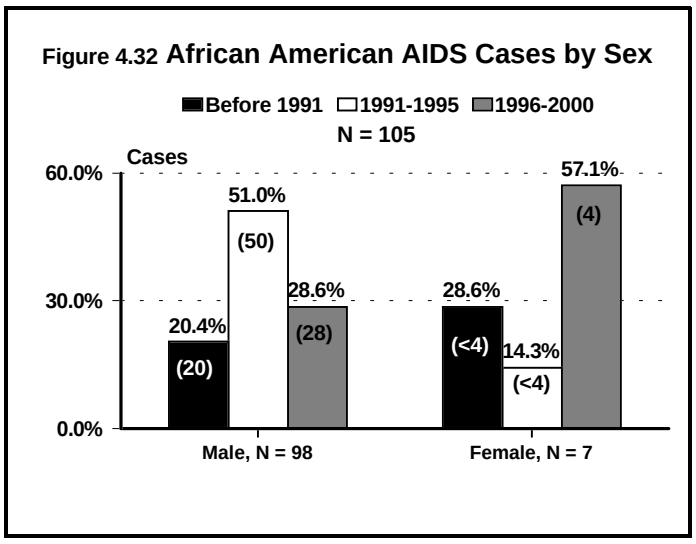
There were 105 cumulative African-American AIDS cases through December 2000. The number of AIDS cases for African Americans is relatively small in Hawai'i. However, the proportion of persons with AIDS who are African-American (4.0%) is larger than this proportion of the state population (1.5%). The proportion of AIDS cases among African-Americans has increased over time (Figure 4.31), but the number of cases has decreased during 1996-2000. The difference among the three periods is not statistically significant ($p>.05$).

Table 4.24 shows the number and proportion of AIDS cases among African Americans. AIDS cases due to MSM and MSM/IDU risk behaviors has decreased over time. At the same time, AIDS cases due to IDU has increased from 9.5% in before 1991 to 13.5% in 1991-1995 to 18.8% in 1996-2000. At the same time, AIDS cases due to heterosexual contact has increased from 1.9% (<4) to 15.6% (5) in the past five years.

Most of the African-American AIDS cases (80%) were diagnosed while in their thirties and forties. The median age at diagnosis for African Americans was 37 years of age.

Among African Americans, higher percentages of male AIDS cases are attributed to IDU (13.3%, 14 cases) and IDU related behavior (23.8%, 25 cases) when compared to all racial and ethnic groups combined: IDU (6.6%, 154 cases) and IDU related

(15.4%, 363 cases).



The gender make-up of African American AIDS cases is 93.3% (98) male and 6.7% (7) female, similar to the state AIDS data. The number and percentage of male cases has decreased but the number and percentage for female cases has increased in recent five year period (Figure 4.32)

Most of the African American AIDS cases were diagnosed in Honolulu county overtime. Table 4.25 shows African American AIDS cases by county. Over the past five years, 93.8% of African-American has been diagnosed in Honolulu County and less than four cases were diagnosed in Hawai'i county. There were no AIDS cases diagnosed in Mau'i County during 1996-2000, there have been no AIDS cases diagnosed in Kaua'i.

Table 4.25 **African American AIDS Cases by County**

County	Before 1991		1991-1995		1996-2000	
	No.	%	No.	%	No.	%
Honolulu	21	100	45	86.5	30	93.8
Hawai'i	0	0	5	9.6	<4	6.3
Mau'i	0	0	<4	3.8	0	0
Kaua'i	0	0	0	0	0	0
Total	**21**	**100**	**52**	**100**	**32**	**100**

Summary

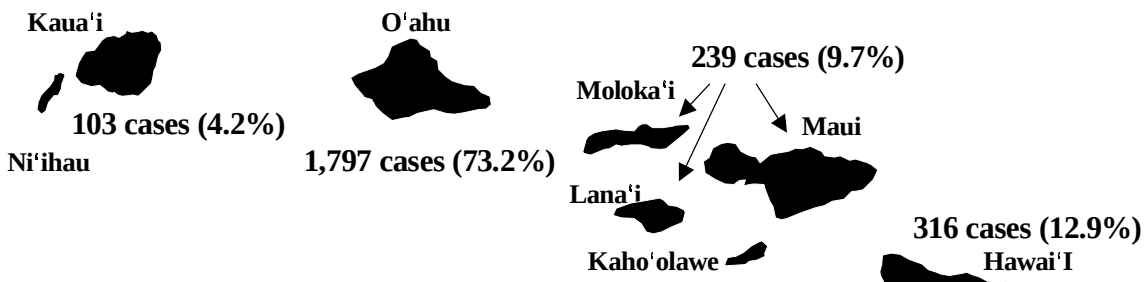
- African-Americans are over-represented among AIDS cases.
- The proportion of African-American AIDS cases due to MSM and MSMIDU has declined in recent years.
- The proportion of AIDS cases due to IDU and IDU related behavior has increased. A higher percentage of the total African-American male AIDS cases are attributed to IDU and IDU related behavior when compared to other racial and ethnic groups combined.
- During 1996-2000, most African-American individuals with AIDS were diagnosed while living in Honolulu County.

Chapter V

The Geographic Distribution of HIV/AIDS Infection

AIDS cases are allocated based on the county of residence of the diagnosed individuals. For planning purposes, the most recent information is usually the most helpful. Figure 5.1 shows the cumulative Hawai'i AIDS cases in each county, as well as AIDS cases and rates [11] per 100,000 population in three time periods. AIDS cases and rates were highest in 1991-1995 and decreased in 1996-2000 for each county. The greatest percent and number of AIDS cases were reported in Honolulu County in all three time periods. In 1996-2000, the proportion of AIDS cases in Maui County exceeded its proportion of the state's population, and the proportion of AIDS cases in Honolulu, Hawai'i and Kaua'i Counties is lower than that of the state's population. In 1996-2000, Maui County had the highest AIDS rate (67.1 per 100,000), followed by Hawai'i County (55.7), Honolulu County (54.9) and Kaua'i County (48.0).

Figure 5.1 **AIDS Cases by County of Residence at Diagnosis, Hawai'i, 1983-**



AIDS Cases and Rates* by County

County	Before 1991			1991-1995			1996-2000			98 Population
	N	%	Rate	N	%	Rate	N	%	Rate	%
Honolulu	485	77.0%	58.0	832	71.8%	96.4	479	71.9%	54.9	73.2%
Hawai`i	72	11.4%	59.8	165	14.2%	124	79	11.9%	55.7	11.9%
Maui	46	7.3%	45.8	112	9.7%	101	81	12.2%	67.1	10.1%
Kaua`i	27	4.3%	52.8	49	4.2%	89.4	27	4.1%	48.0	4.7%
Total	630	100%	56.8	1,158	100%	99.7	666	100%	55.9	100%

* per 100,000 population

[11] The formula for calculating the cumulative AIDS rate follows (For example in Honolulu County):

$$\text{1996-2000 Cumulative AIDS Rate} = \frac{\textbf{479 (No. Of cumulative AIDS reported in 1996-2000}}{\textbf{871, 768 } \textit{(1998 Honolulu County population estimate)}} \times 100{,}000 = 54.9$$

Population are based on the State of Hawai`i Data book 1999.

Each county's male and female AIDS cases in 1996-2000 are shown in Table 5.1. Compared to the state AIDS profile (male 89.2%, female 10.8%), Hawai'i County has a much larger proportion of the total AIDS cases among females (19.0%); Kaua'i County and Maui County have a greater proportion of the total AIDS cases among males (96.3% and 93.8%).

Table 5.1 **AIDS Cases by County and Sex, 1996-2000**

Gender	Honolulu		Hawai'i		Maui		Kaua'i		Statewide	
	N	%	N	%	N	%	N	%	N	%
Male	428	89.4%	64	81.0%	76	93.8%	26	96.3%	594	89.2%
Female	51	10.6%	15	19.0%	5	6.2%	<4	3.7%	72	10.8%
Total	479	100%	79	100%	81	100%	27	100%	666	100%

Table 5.2 details the modes of transmission for cases in each county for 1996-2000. MSM is the highest risk factor in each county, ranging from 55.7% of the Hawai'i County cases to 82.7% of Maui County cases. The proportion of total cases attributed to heterosexual contact (15.2%), IDU (10.1%) and IDU/MSM (7.6%) is higher in Hawai'i County than statewide as a whole.

Table 5.2 **AIDS Cases by County and Risk, 1996-2000**

Risk Factor	Honolulu		Hawai'i		Maui		Kaua'i		Statewide	
	N	%	N	%	N	%	N	%	N	%
MSM	325	67.8%	44	55.7%	67	82.7%	19	70.4%	455	68.3%
IDU	38	7.9%	8	10.1%	5	6.2%	3	11.1%	54	8.1%
MSM/IDU	28	5.8%	6	7.6%	2	2.5%	0	0.0%	36	5.4%
Heterosexual	45	9.4%	12	15.2%	4	4.9%	0	0.0%	61	9.2%
Transfusion	4	0.8%	3	3.8%	1	1.2%	1	3.7%	9	1.4%
Perinatal	3	0.6%	0	0.0%	0	0.0%	0	0.0%	3	0.5%
Hemophiliac	2	0.4%	1	1.3%	1	1.2%	0	0.0%	4	0.6%
Undetermined	34	7.1%	5	6.3%	1	1.2%	4	14.8%	44	6.6%
Total	479	100%	79	100%	81	100%	27	100%	666	100%

Caucasians comprised the majority of cases in each county, ranging from 50.5% of Honolulu County cases to 96.3% of Kaua'i County cases (Table 5.3). Compared to the proportion of each county's population, Caucasians have a higher proportion of AIDS cases in each county. African-Americans have a higher proportion of AIDS cases in Honolulu county compared to their proportion of Honolulu's population, and Hispanics comprise a higher proportion of cases in Maui County compared to their proportion of Maui County's population.

All other race/ethnic groups had a lower proportion of AIDS cases than their proportion of the population in each county (Table 5.3 and Table 5.4).

Table 5.3 AIDS Cases and Population by Race/Ethnicity for Each County, 1996-2000

	Honolulu			Hawai'i			Maui			Kaua'i			Statewide		
	N	%	% P*	N	%	% P*	N	%	% P*	N	%	% P*	N	%	% P*
Caucasian	242	50.5%	31.0%	49	62.0%	40.1%	55	67.9%	39.4%	26	96.3%	35.1%	372	55.9%	33.1%
Asian and PI	177	37.0%	64.8%	25	31.6%	58.2%	17	21.0%	59.1%	<4		63.8%	220	33.0%	63.4%
Hawaiian	55	11.5%	N/A	4	16.5%	N/A	4	12.3%	N/A	4		N/A	4	11.9%	N/A
Filipino	38	7.9%	N/A	4	5.1%	N/A	<4		N/A			N/A	43	6.5%	N/A
Japanese	31	6.5%	N/A	4	5.1%	N/A	4	4.9%	N/A			N/A	39	5.9%	N/A
Chinese	14	2.9%	N/A	<4		N/A			N/A			N/A	15	2.3%	N/A
Other API	39	8.1%	N/A	<4		N/A	<4		N/A			N/A	44	6.6%	N/A
Afri. American	30	6.3%	3.7%	<4		0.8%			0.9%			0.7%	32	5.9%	2.9%
Amr,/Indian	<4		0.5%			0.9%	<4		0.7%			0.4%	3	4.8%	0.6%
Hispanic	28	5.8%	7.4%	<4		10.0%	8	9.9%	8.8%			11.4%	39	0.5%	8.0%
Total	479	100%	100%	79	100%	100%	81	100%	100%	27	100%	100%	666	100%	100%

*Percent of county or state population. Because there are no population data available for APIs, APIs are shown as one group.
** All group are shown as percent of total data.
Source: The State of Hawai'i Data Book 1999, Table 1.33. Http://www.Hawai'i.gov/dbedt/.

Table 5.4 Hawaiian AIDS Cases and Population for Each County, 1996-2000

	Honolulu			Hawai'i			Maui			Kaua'i			Statewide		
	N	%	% P*	N	%	% P*	N	%	% P*	N	%	% P*	N	%	% P*
Hawaiian	55	11.5%	18.7%	13	16.5%	31.1%	10	12.3%	22.2%			19.5%	79	11.9%	20.6%

*Percent of county or state population. Source: The State of Hawai'i Data Book 1999, Table 1.30. Http://www.Hawai'i.gov/dbedt/.
The state total population is difference with the Table 5.3.

Table 5.5 further exhibits characteristics of AIDS cases in the four areas of Honolulu County and in the two areas in Hawai'i County. A larger percentage of AIDS cases in Central O`ahu, Leeward O`ahu and Windward O`ahu are female compared to the proportion of cases among females in urban Honolulu, Honolulu County (10.6%) and statewide (10.8%). Hilo district ranked the highest in the state for proportion of cases among females (21.7%) during 1996-2000.

Table 5.5 **Honolulu and Hawai'i District AIDS Cases by Select Characteristic, 1996-2000**

	O`ahu											
Race/	Central		Honolulu		Leeward		Windward		*Hawai`i* Kona		Hilo	
Ethnicity	N	%	N	%	N	%	N	%	N	%	N	
Caucasian	13	28.9%	186	56.0%	16	34.0%	21	48.8%	24	72.7%	25	54.3%
Asian and PI	26	57.8%	107	32.2%	22	46.8%	16	37.2%	5	15.2%	20	43.5%
Hawaiian	*10*	*22.2%*	*29*	*8.7%*	*8*	*17.0%*	*6*	*14.0%*	*<4*		*10*	*21.7%*
Filipino	*7*	*15.6%*	*17*	*5.1%*	*6*	*12.8%*	*4*	*9.3%*				
Japanese	*4*	*8.9%*	*25*	*7.5%*	*<4*		*<4*				*4*	*8.7%*
Chinese	*<4*		*10*	*3.0%*	*<4*		*<4*					
Other API	*<4*		*26*	*7.8%*	*6*	*12.8%*	*4*	*9.3%*				
Hispanic	<4		16	4.8%	6	12.8%	4	9.3%	<4		<4	
Afri. American	<4		23	6.9%	<4		<4		<4			
Amr,/Indian	<4		0		<4		0					
Risk Behaviors												
MSM	25	55.6%	243	73.2%	26	55.3%	25	58.1%	24	72.7%	20	43.5%
IDU	5	11.1%	28	8.4%	<4		<4		<4		7	15.2%
MSM/IDU	<4		19	5.7%	4	8.5%	<4		<4		5	10.9%
Heterosex	5	11.1%	23	6.9%	7	14.9%	8	18.6%	5	15.2%	8	17.4%
Other	9	20.0%	19	5.7%	7	14.9%	5	11.6%	<4		6	13.0%
Gender												
Male	39	86.7%	304	91.6%	39	83.0%	36	83.7%	27	81.8%	36	78.3%
Female	6	13.3%	28	8.4%	8	17.0%	7	16.3%	6	18.2%	10	21.7%
Total	**45**	**100%**	**332**	**100%**	**47**	**100%**	**43**	**100%**	**33**	**100%**	**46**	**100%**

* All group are shown as percent of total AIDS cases. There were 12 O`ahu cases that could not be identified as belonging to any these four areas.

Summary

- AIDS cases and rates were highest in 1991-1995 and decreased in 1996-2000 for each county.
- Most of the state's AIDS cases (479, 71.9%) were reported in Honolulu County during 1996-2000.

- In 1996-2000, the proportion of AIDS cases in Maui County exceeded its proportion of the state's population, and the proportion of AIDS cases in Honolulu, Hawai‘i and Kaua‘i Counties is lower than that of the state's population.

- In 1996-2000, Maui County had the highest rate of AIDS (67.1 per 100,000), followed by Hawai‘i County (55.7), Honolulu County (54.9) and Kaua‘i County (48.0)

- Hawai‘i County has a much larger proportion of the total AIDS cases among females (19.0%) compared to in the state (10.8%).

- Compared to the state AIDS profile, a higher proportions of AIDS cases are attributed to MSM (82.7%) in Maui County and are attributed to heterosexual contact (15.2%) in Hawai‘i County.

- Compared to the proportion of each county's population, Caucasians have a higher proportion of AIDS cases in each county; African-Americans have a higher proportion of AIDS cases in Honolulu county, and Hispanics comprise a higher proportion of cases in Maui county.

- A larger percentage of AIDS cases in Central O`ahu, Leeward O`ahu and Windward O`ahu are female compared to the percentage of cases among females in urban Honolulu, Honolulu County (10.6%) and statewide (10.8%).

- Hilo district ranked the highest in the state for proportion of cases among females (21.7%) during 1996-2000.

Chapter VI

Data on Related Diseases and Programs

Sexually Transmitted Diseases

The relationship of STDs to increased susceptibility and facilitation of HIV transmission is well documented. The prevention and control of all bacterial STDs can also have an impact on the HIV transmission. In Hawaii, gonorrhea and chlamydia are two predominant STDs. Table 6.1 shows number of cases and proportions for all three STDs for males and females.[12] The number and proportion of cases for gonorrhea and chlamydia have decreased for females in year 2000 compared to 1999. There were very few primary and secondary syphilis cases during 1999 and 2000.

Table 6.1 **Hawai'i STDs Data**

Sex	**Gonorrhea**				**Chlamydia**				**Syphilis**			
	1999		2000		1999		2000		1999		2000	
	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%	Cases	%
Male	212	45.5	238	50.2	584	18.6	781	22.0	1	33.3	1	50.0
Female	254	54.5	236	49.8	2,564	81.4	2,765	78.0	2	66.7	1	50.0
Total	**466**	**1000**	**474**	**100**	**3,148**	**100**	**3,556**	**100**	**3**	**100**	**2**	**100**

Gonorrhea and chlamydia rates for 1999 and 2000 were shown in Figure 4.11. Both gonorrhea and chlamydia rates were highest for African Americans. Figure 4.13 and 4.14 show proportions of gonorrhea and chlamydia cases for last five years (1996-2000).

Figures 6.1, 6.2, and 6.3 show number of cases for gonorrhea, chlamydia, and syphilis since the beginning of each surveillance for each STD.

[12]Source: STD Prevention Program

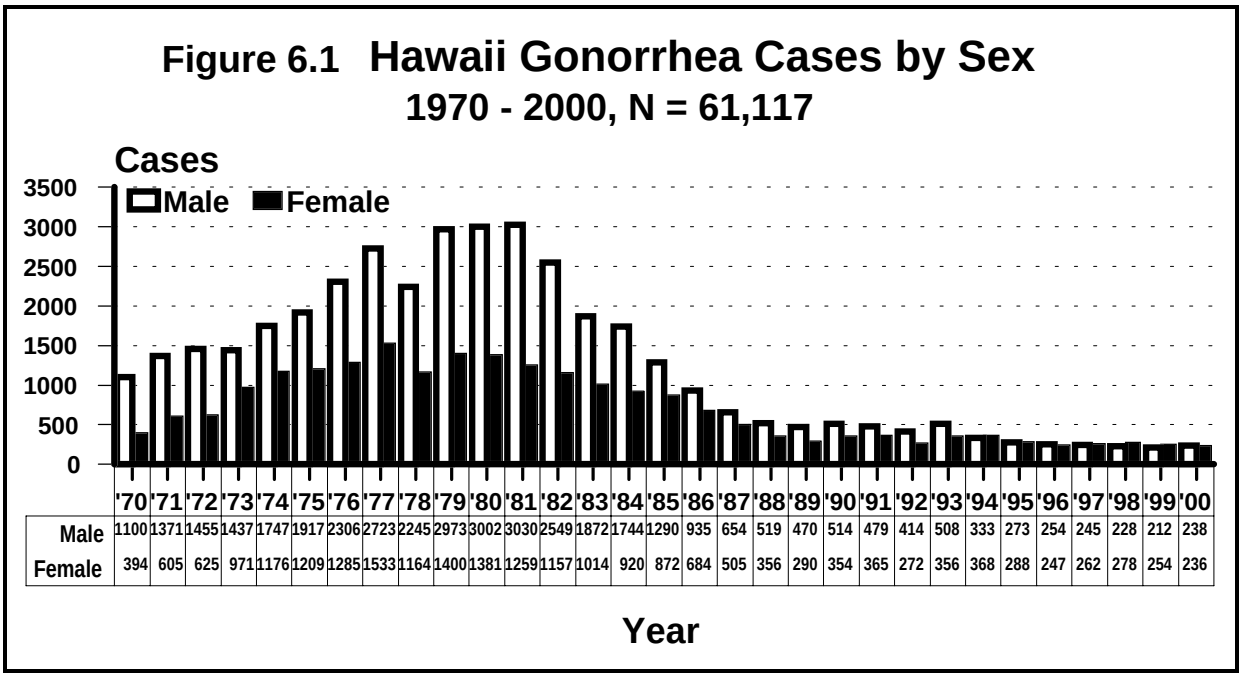


Figure 6.1 shows the number of cases for gonorrhea among males and females increased from 1970 to 1977 with a year break in 1978, then increased again 1979 and decreased steadily thereafter.

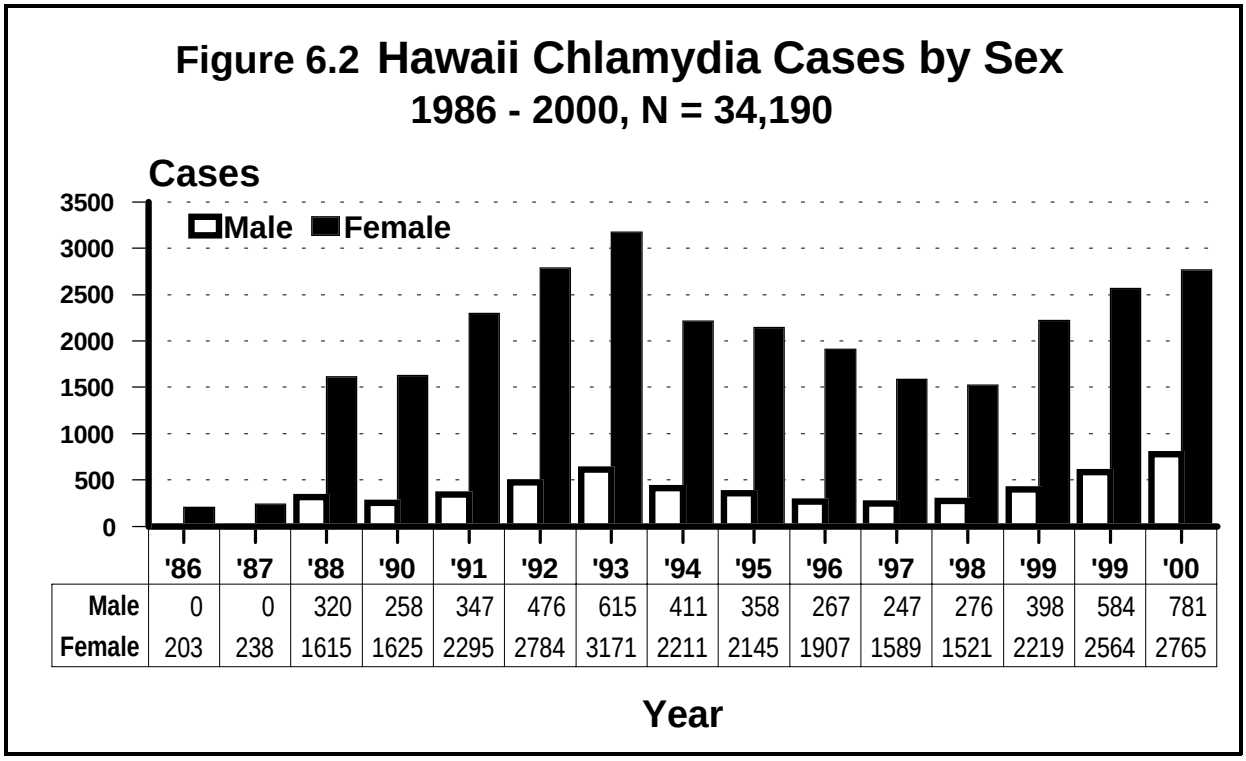
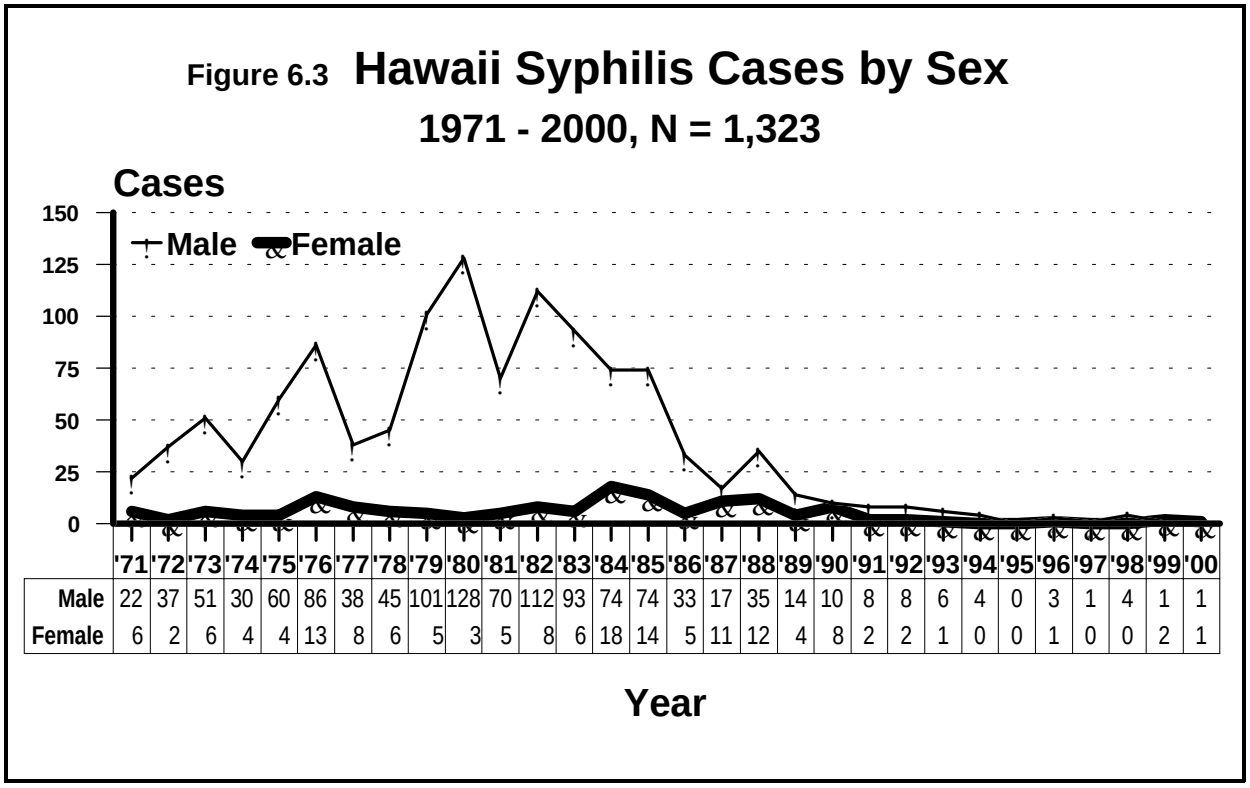


Figure 6.2 shows the number of cases for chlamydia among female has increased dramatically from 1988 to 1993 and decreased thereafter to 1998. The number increased again from 1997 to 2000.



	'71	'72	'73	'74	'75	'76	'77	'78	'79	'80	'81	'82	'83	'84	'85	'86	'87	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
Male	22	37	51	30	60	86	38	45	101	128	70	112	93	74	74	33	17	35	14	10	8	8	6	4	0	3	1	4	1	1
Female	6	2	6	4	4	13	8	6	5	3	5	8	6	18	14	5	11	12	4	8	2	2	1	0	0	1	0	0	2	1

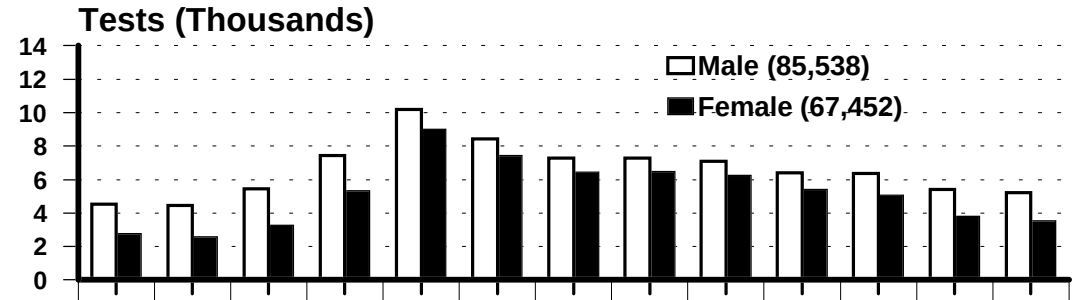
Figure 6.3 shows the number of syphilis cases is significantly smaller than of gonorrhea and chlamydia. There were only two cases reported in year 2000.

Counseling and Testing Data[13]

HIV Counseling and Testing (C&T) has played a central role in the prevention and treatment of HIV infection. The data collected at HIV C&T sites represent the results of tests performed for people who access this public health service. Since these tests were performed at the state's free and anonymous HIV counseling and testing sites, some people may have repeated their HIV test. Many additional tests are carried out by private doctors and the numbers and results of these tests are unknown. Therefore, community planning groups should use caution with these data.

[13]Source: Hawaii Department of Health Counseling and Testing Program

Figure 6.4 Hawaii Counseling and Testing Data
1988-2000, N = 152,990

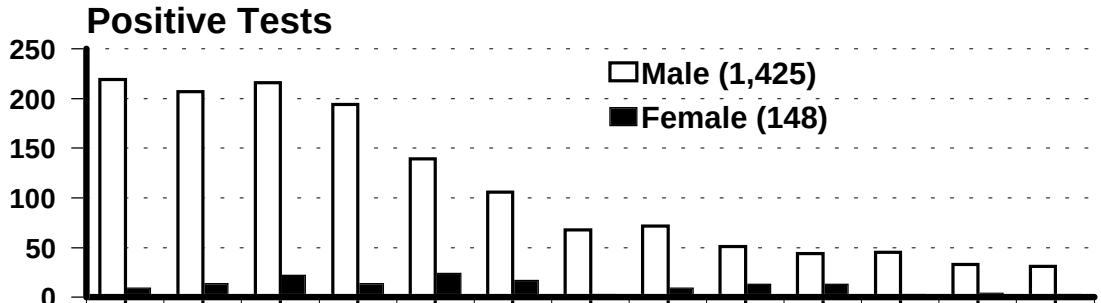


	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
Male (85,538)	4.526	4.463	5.444	7.44	10.188	8.446	7.283	7.266	7.101	6.411	6.367	5.396	5.207
Female (67,452)	2.784	2.579	3.281	5.341	8.998	7.431	6.445	6.49	6.268	5.41	5.08	3.798	3.547

Year

Figures 6.4 shows counseling and testing data from 1988 through 2000 and the Figure 6.5 shows the HIV positive test result for males and females. As of December 2000, there were 152,990 of anonymous HIV test were performed statewide. The number of anonymous HIV test increased from 1988 to 1992 and decreased thereafter. Of the 152,990 tests, there were 85,538 males and 67, 452 females (figure 6.4). Figure 6.5 shows the number of HIV positive test results from 1988 to 2000 for male and female. A total of 1,573 (1.02%) tests were positive, 1,425 males and 148 females. There has been no clear trend in the number of positive test for females, but the numbers of positive tests for males has been falling since 1990, with the exception of a small

Figure 6.5 Hawaii Counseling and Testing Data
1988-2000, N = 1,573



	'88	'89	'90	'91	'92	'93	'94	'95	'96	'97	'98	'99	'00
Male (1,425)	219	207	216	194	139	106	68	72	51	44	45	33	31
Female (148)	9	14	22	14	24	17	3	9	13	13	3	4	3

Year

Table 6. 2 also details HIV testing data since 1988 for male and female.

Table 6.2 **Annual HIV Positive Tests From HIV Counseling and Testing Program 1988 - 2000**

Male	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Tests	4,526	4,463	5,444	7,440	10,188	8,446	7,283	7,266	7,101	6,411	6,367	5,396	5,207
Positive	219	207	216	194	139	106	68	72	51	44	45	33	31
% Positive	4.8%	4.6%	4.0%	2.7%	1.4%	1.3%	0.9%	1.0%	0.7%	0.7%	0.7%	0.6	0.4%
Female													
Tests	2,784	2,579	3,281	5,341	8,998	7,431	6,445	6,490	6,268	5,410	5,080	3,798	3,547
Positives	9	14	22	14	24	17	3	9	13	13	3	4	3

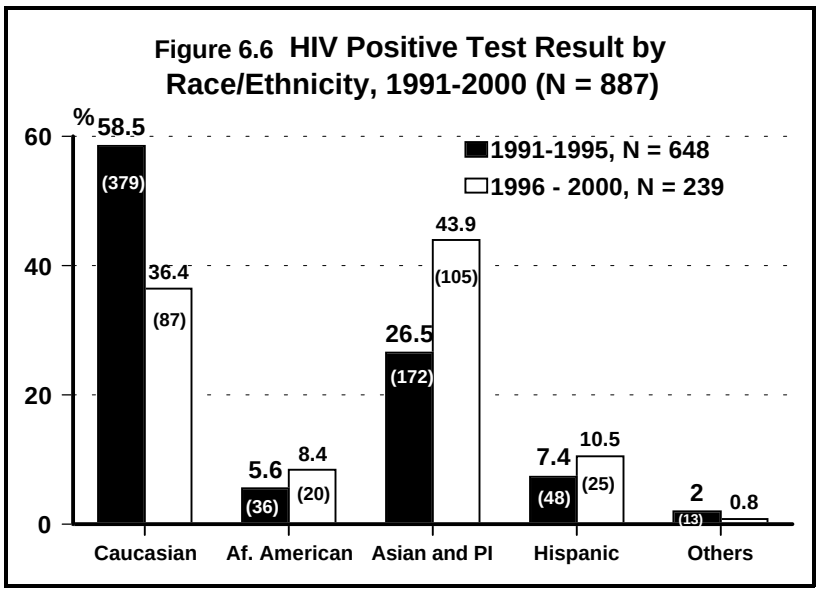
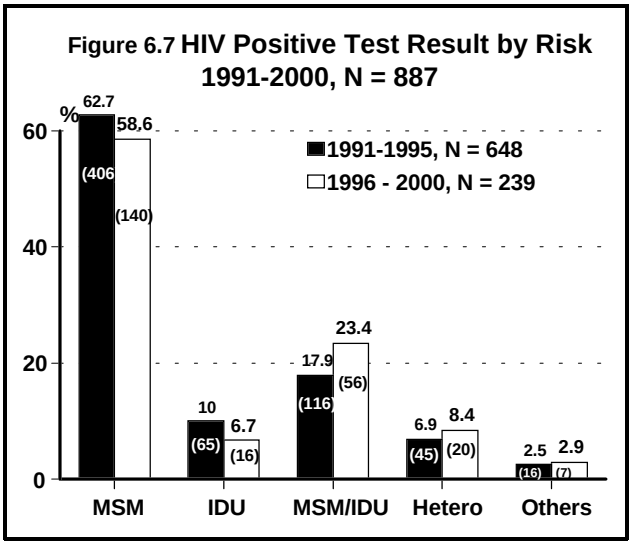
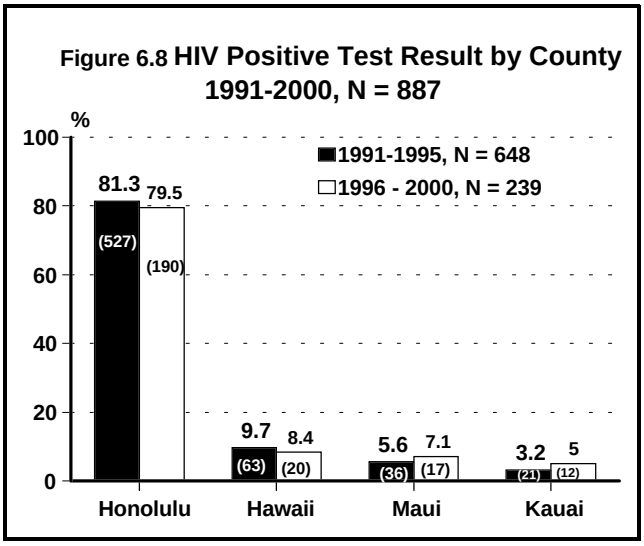


Figure 6.6 illustrates the distribution of HIV positive test results by racial/ethnic groups for two periods, 1991-1995 and 1996-2000. During 1991-1995, majority of the HIV positive test results were among Caucasians (58.5%, 379) and followed by Asian and Pacific Islanders (API) (26.5%, 172). But in 1996-2000 majority of HIV positive test results were among API group (43.9%, 105) and followed by Caucasians (36.4%, 87). The proportion of total tests of African-Americans was stable, but the proportion of total HIV positive tests of African-Americans increased significantly ($p < .05$).

Figure 6.7 shows HIV positive test results by risk behavior for the same two time periods, 1991-1995 and 1996-2000. Most of the HIV positive test results were among male having sex with





male (MSM), and followed by duel risk behavior injection drug use and MSM (IDU/MSM). The number and proportion of both risk MSM and MSM/IDSU behaviors are significantly higher than other risk behaviors. Figure 6.8 shows distribution of HIV positive test results by county. Most HIV positive test results were in the Honolulu County, 81.8% (527) in 1991-1995 and 79.5% (190) in 1996-2000.

Table 6.3 **HIV positive Tests by age, HIV C&T Program**

	1991-1995		1996-2000	
Age	No.	%	No.	%
<20	8	1.2	1	0.4
20-29	219	33.8	61	25.5
30-39	257	39.7	106	44.4
40-49	136	21.0	53	22.2
>49	28	4.3	13	5.4
Unknown	0	0	5	2.1

From 1991 to 2000, the largest number and proportion of HIV positive test results were among persons 30-39 years of age, 39.7% in 1991-1995 and 44.4% in 1996-2000. The second largest number of HIV positive test results were among 20-29 years of age group, 33.8% (219) and 25.5% (61) for 1991-1995 and 1996-2000 respectively.

Tuberculosis Data

From 1996 to 2000, there were 868 TB cases and 666 AIDS cases reported to Hawaii Department of Health. Of these, only 0.8% (7 cases) were diagnosed with both AIDS and TB. The demographic profile of these populations are very similar.

AIDS Service Organizations (ASOs)[14]

In Hawaii, the AIDS Service Organizations that provide case management services are: Life Foundation (in Honolulu County), West Hawaii AIDS Foundation (in Kona side, Hawaii County), Big Island AIDS Project (in Hilo, Hawaii County), Maui AIDS Foundation (Maui County), and Malama Pono (Kauai County). The State Department of Health (DOH) contracts for AIDS care services with these ASOs. This ASO data represents the HIV positive clients who received services during the 1999 and 2000. A few of these clients may have received services more than one agency, thus the data may represent duplicate number for clients counts.

Table 6.4 **ASO Case Load by Sex**

Sex	1999		2000	
	No.	**%**	**No.**	**%**
Male	757	86.2	755	85.5
Female	114	13.0	121	13.7
Other	7	0.8	0.8	0.8
Total	**878**	**100**	**883**	**100**

During 1999 and 2000, there were 878 and 883 clients who received services statewide in each year respectively. Table 6.4 shows distribution of ASO cases load by sex. There were 86.2% (757) male and 13.0% (114) female, and <1% (7) other in 1999. ASO client service slightly increased in 2000 for female (0.7%)

Table 6.5. **ASO Case Load by Age**

	1999		2000	
Age		**%**	**No.**	**%**
<20	10	1.1	9	1.0
20-29	38	4.3	41	4.6
30-39	318	36.2	314	35.6
40-49	345	39.3	342	38.7
>49	167	19.0	177	20.0
Total	**878**	**100**	**883**	**100**

Table 6.5 shows the distribution of ASO case load by different age group. In each year, most of the clients were in their 30-49 years of age. The percentages and numbers of ASO case load increased for both 20-29 and over 49 years of age groups during 2000 compared to 1999.

[14] Source: AIDS Service Organizations

Table 6.6 **ASO Case Load by Race/Ethnicity**				
Race/Ethnicity	**1999**		**2000**	
	No.	%	No.	%
Caucasian	484	55.1	475	53.8
Asian &Paci. Islanders.	30	3.4	24	2.7
Hawaii /Part.Haw.	***92***	***10.5***	***106***	***12.0***
Filipino	***34***	***3.9***	***42***	***4.8***
Japanese	***25***	***2.8***	***29***	***3.3***
Chinese	***13***	***1.5***	***12***	***1.4***
Other mix	***11***	***1.3***	***13***	***1.5***
Other API	***34***	***3.9***	***34***	***3.9***
Hispanic	85	9.7	80	9.1
African-American	50	5.7	49	5.5
Others	20	2.3	19	2.2
Total	**878**	**100**	**883**	**100**

Table 6.6 shows ASO case load by race/ethnicity. Most of the clients, who received services were Caucasians with 55.1% (484) in 1999 and 53.8% (475) in 2000. The percentage of client services increased for Hawaiian/Part Hawaiian from 10.5% (92) in 1999 to 12.0% (102) in 2000.

Table 6.7 **ASO Case Load by County**				
County	**199**		**2000**	
	No.	**%**	**No.**	**%**
Honolulu	573	65.3	573	64.9
West Hawai‘i	64	7.3	67	7.6
East Hawai‘i	96	10.9	91	10.3
Maui	108	12.3	111	12.6
Kauai	37	4.2	41	4.6
Total	**878**	**100**	**883**	**100**

Table 6.7 shows ASO clients by county. Most of the services were provided in Honolulu County and followed by Maui County. The number of service increased in 2000 compared to 1999 in West Hawai‘i, Maui, and in Kauai County.

APPENDIX I

Definitions - "Epidemiology 101"[1]

AIDS - Acquired immunodeficiency syndrome characterized by severe HIV-related immunosuppression and associated conditions which include life-threatening illness.

Anonymous testing - HIV test conducted without identifiers so no one can link a person's name with a test result.

Confidential HIV testing - HIV test linked to a person's name, which is kept confidential under state/local laws, assuring confidentiality to prevent potential for disclosure or discrimination, and to protect the patient's rights to privacy.

Epidemiology - The study of the patterns and determinants of health and disease in populations. Epidemiology is the science that underlies the public health practice of disease prevention and control. Epidemiologists seek to define the occurrence of disease in terms of person, place, and time, such as:

- who is affected; what is the pattern of disease in affected persons; what groups are at greatest risk?
- what are the exposures or behaviors that place individuals at risk for disease?
- where are diseases occurring; where are the events occurring that place individuals at risk for disease?
- when are diseases occurring; what are the trends?

An example would be a description of what populations, age groups and ethnic groups are affected by HIV/AIDS in a defined area, such as a state.

HIV - Human immunodeficiency virus, the causative agent of AIDS. An individual may be infected with HIV for several years before developing the symptoms or conditions associated with an AIDS diagnosis; that is, a person may be HIV infected (or HIV positive), but not have AIDS.

Incidence - The number of **new** cases of a disease or condition that occur in a specified population during a specified period of time. Often incidence is expressed annually, e.g., the number of AIDS cases diagnosed in the United States in 1996.

Incidence rate - The number of **new** cases that occur in a specified population during a specified period of time divided by the population at risk, often expressed as an annual incidence per 100,000 population.

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[1]National Alliance of State and Territorial AIDS Directors, HIV Prevention Community Planning Bulletin, January 1997, 9-10.

Prevalence - The number of persons in a specified population living with a disease or condition at a specific point in or period of time. (For example, the number of people living with AIDS in the U.S. or a specific state at a given time).

Prevalence rate - The number of persons in a specified population **living** with a disease or condition at a specific point in or period of time divided by the population at risk, sometimes expressed as percent.

Seroepidemiology - Epidemiologic study or activity based on the serologic detection of specific antigens or antibodies. Seroepidemiology tracks patterns in HIV disease based on serologic evidence of HIV infection. A serologic test is a test performed on blood serum.

Seroincidence - The number of **new** infections identified serologically (through blood tests) in a specified population during a specified period of time. (For example, the number or rate of new HIV or AIDS cases in a particular period of time).

Seroprevalence - The number of persons in a specified population who have serologic evidence of a disease at a specific point in or period of time. An example of seroprevalence would be the long-term rate or percentage of people infected with HIV in a defined population.

Serosurveillance - Ongoing, systematic collection, analysis, interpretation, and timely dissemination of **serologic** data. For example, standardized HIV seroprevalence surveys are conducted in designated subgroups of the population nationwide, as part of a surveillance system to monitor the HIV epidemic in the U. S.

Surveillance - The ongoing, systematic collection, analysis, and interpretation of outcome specific data, closely integrated with the timely dissemination of these data to those responsible for preventing and controlling disease or injury (REF: Thacker SB, Berkelman RL. Public Health Surveillance in the United States. Epidemiol Rev 1988;10:164-190). For example, AIDS case data are reported to CDC from state and local health departments and are analyzed to get a picture of the trends in the HIV epidemic in states and nationwide.

APPENDIX II

ABBREVIATIONS USED

>	greater than
<	less than
Afr.-Amer.	African Americans
AIDS	Acquired immune deficiency syndrome
API	Asians and Pacific Islanders
Asian and PI	Asians and Pacific Islanders
CDC	Centers for Disease Control and Prevention
Co.	County
CPG	Community Planning Group
DOH	Hawaii Department of Health
Hawai‘i./Pt. Haw.	Hawaiians and Part-Hawaiians
Hetsx	Heterosexual contact
HI	Hawai‘i
HIV	Human immunodeficiency virus
HIV+	having positive blood test for HIV (serologic evidence).
HSPAMM	Hawaii Seropositivity and Medical Management Program
IDU	Injection drug user
MMWR	Morbidity and Mortality Weekly Report
MSM	Men who have sex with men
MSM/IDU	Men who have sex with men and inject drugs
SAPB	STD/AIDS Prevention Branch of the Hawai‘i Department of Health
STD	Sexually transmitted disease